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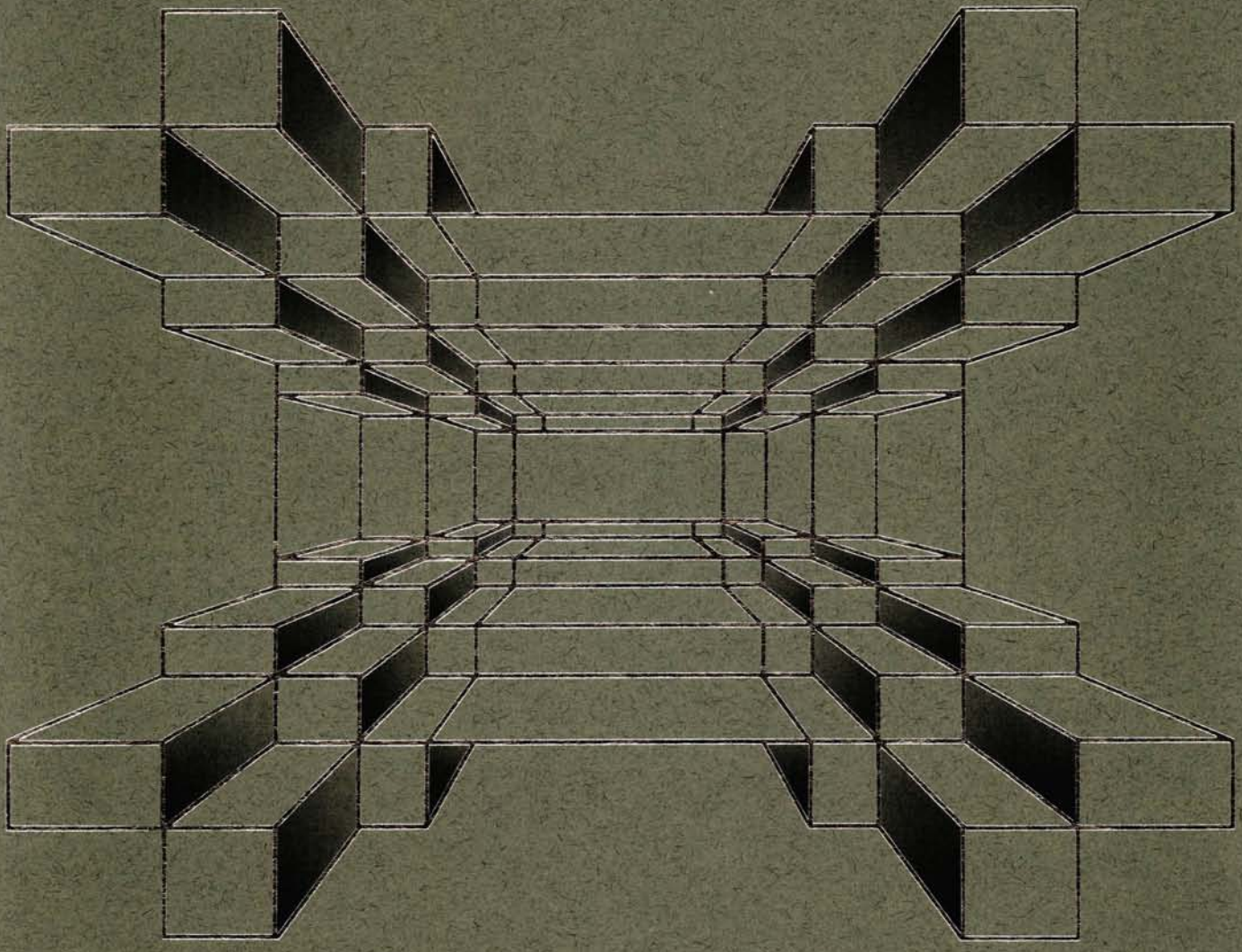
for West Michigan



Forecast

- Manufacturing Provides Stability as Confidence Wanes

Feature Article

- Workplace Education Programs in Small and Medium-Sized Firms in Michigan

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BUSINESS OUTLOOK
for West Michigan

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The BUSINESS OUTLOOK DISCUSSION PAPER

Workplace Education Programs in Small and Medium-Sized Firms in Michigan

Kevin Hollenbeck, William Anderson, and Ken Kline

A remarkable phenomenon is occurring in a small number of Michigan workplaces. It is possible to walk into these firms and find, on premises, classrooms—complete with chalkboards, audio-visual equipment, textbooks, and reference libraries. Furthermore, if you happen to visit one of these classrooms during an instructional period, you are likely to observe a class in reading, writing, or arithmetic. In many of these companies, you would be able to find at least one individual working toward completion of his or her high school diploma or preparing for the General Educational Development (GED) examination.

This essay presents a *systematic*, baseline picture of workplace education programs in small and medium-sized businesses (less than 500 employees) in Michigan. Specifically, it addresses why some firms are offering and other firms are not offering workplace education programs, what are the characteristics of the programs being provided, and what are the impacts of these programs on firms and employees.

The essay draws upon data collected as part of the Upjohn Institute's project on *Workplace Education in Small and Medium-Sized Businesses in Michigan*. Most of the publicity about workplace education focuses on programs in large firms.[1] Little is known about small business involvement. To overcome this gap, a research organization named Southport Institute for Policy Analysis (SIPA) obtained financial support from several foundations, including the Kellogg Foundation in Battle Creek and the Mott Foundation in Flint, to study workplace education in small businesses. The research plan that SIPA followed involved case studies of small firms in several states and a representative sample survey of firms across the nation. The Upjohn Institute analyzed the case studies in Michigan and the survey data for Michigan firms.

Since a major focus of the overall study was to determine why some small firms offer workplace education, whereas the overwhelming majority do not, the case studies were undertaken in a number of firms with programs and comparable firms without programs. Between May 1991 and July 1992, Upjohn Institute project staff spent one or two days inside 28 Michigan businesses. At each company, we interviewed the chief executive officer, human resources manager, training director, two or three supervisors, three to seven employees, a union representative (if appropriate), and, if the firm offered a program, the external workplace education coordinator and one or two instructors.

The other source of data analyzed in this study, a mail survey of small businesses in Michigan, resulted in 251 responses from all sectors of the economy, excluding agriculture and government. A total of 53 of these firms reported that they had a workplace education program.

Basic Skills and Workplace Education

The term "basic skills," as used in the study, was defined as:

> The ability to perform the following skills at the level required by the job: reading and writing English, speaking and understanding English, mathematics, problemsolving, and interpersonal skills (e.g., effective communication, team building).

Many workers have deficiencies in some or all of these skills. As a result these workers are less than fully productive and affect negatively the overall performance of the firm. National estimates vary, but generally they suggest that between 15 and 25 percent of the U.S. workforce is deficient in basic skills. In Michigan, small business employers reported in the mail survey that, on average, over 25 percent of workers have difficulties (that affect job performance) with mathematics, slightly less than 25 percent have difficulties with problemsolving or interpersonal skills, and about 15 percent have difficulties in reading, writing, speaking, or understanding English.[2] Furthermore, employers responded that workers' basic skills are "very important" for firm productivity and profits.

Workplace education programs provide formal training to enhance workers' basic skills. Specifically, we asked employers if they offered a workplace education program defined as follows:

> Workplace education programs provide training—separate from regular job activities—in

one or more of the following: reading and writing English, speaking and understanding English, mathematics, problemsolving, and interpersonal skills. Such a program may take place at the worksite, somewhere else, or a combination of both.

It is very difficult to estimate how many firms have such programs. Surveys of firms suffer from response bias because firms that offer such programs are more likely to answer the survey. Furthermore, since workplace education represents a transaction between employer and employee that does not involve public funding, no centralized data are collected on the subject. *These caveats aside, we estimate that fewer than 5 percent of small business firms offer workplace education programs, and the incidence is probably more on the order of 1 to 3 percent.*

Why DO's Do and DON'T's Don't

In our research project a firm that offered a workplace education program is called a "DO" and one that doesn't offer a program a "DON'T." We collected a considerable amount of data about the "DO's" and "DON'T's" to see if there were any systematic differences between them, such as industry, size of firm, collective bargaining status, and so forth. In general, there are only a few systematic differences between "DO's" and "DON'T's" in terms of observable characteristics. The general relationships observed were that (1) manufacturing firms were more likely to have a program than nonmanufacturing firms; (2) firms with programs had more employees; (3) firms with programs had slightly better benefits, particularly pension coverage; and (4) firms with programs spent more on training. Otherwise, there were no differences in characteristics such as percentage of part-time workers, percentage of female workers, wages, turnover, unionization, or profits.

Firms may be motivated to offer workplace education programs for any number of reasons. In our investigation, we found that the major reasons why firms offer workplace education programs were as follows:

- Introduction of statistical process control into manufacturing—usually a customer requirement
- Reorganization of a work (e.g., synchronous or just-in-time manufacturing, self-managed teams)
- Availability of subsidy
- Business owner's strong belief in value of education and training

Most of the employers interviewed either in case studies or through the mail survey were in the manufacturing sector. Increased global competition in nearly all manufacturing sectors, but especially in the state's troubled automobile industry, has caused significant distress among the state's manufacturers. Some employers are responding through restructuring and reorganizing their production process, and, as a result, are demanding more from their existing workforce. The surveyed firms were asked if they implemented any of the following restructuring and/or reorganizing activities:

- Work teams or quality circles
- Total quality management
- Profit/gain sharing
- Reduction of management layers/oversight
- Increased responsibility for all workers (empowerment)
- Integrated quality process control into production (e.g., statistical process control)
- Just-in-time or computer-integrated manufacturing

The "DO's" pursued more of these activities to a much greater extent than did the "DON'T's"—an average of over four out of the seven activities compared to an average of just under three out of seven. Reorganization activities are being undertaken in manufacturing at a much greater rate than in nonmanufacturing. In both manufacturing and nonmanufacturing, perhaps the most dramatic evidence of the changes in the workplace is the way that business, not only in manufacturing but also in the service sector, has embraced total quality management (TQM).

One method for achieving quality that many companies have adopted is statistical process control (SPC). Adoption of SPC has been an important stimulus to workplace education because companies found that employees did not have the math or statistical knowledge or skills to implement SPC. Thus almost every company's SPC training involves remediation in math skills.

Another type of workplace restructuring that has occurred because of increased competitiveness has been an emphasis on minimizing middle management and pushing decisionmaking authority down to the shop floor. This requires the development of problemsolving skills of workers, and many workplace education programs explicitly train for problemsolving.

Two sources of subsidy that Michigan employers have used to initiate their education programs have been the Michigan Quickstart program and the U.S. Department of Education's Workplace Literacy Grants. Quickstart was a training/economic development program of the Blanchard administration (no longer in existence) which provided modest subsidies for training to businesses relocating to Michigan or undergoing major expansions in Michigan.[3] The federal Workplace Literacy Grants have been awarded to educational institutions annually since 1989, and Michigan institutions have received five of these grants. The business partners in these grants have historically been large

employers, but the Department of Education has altered the program to enlist more small business partners.

The final major reason for some companies offering workplace education programs was some individual's strong belief in education (usually the owner). In a plastics firm, the owner was clearly bothered by paying relatively low wages to his production workers, but felt that if he raised wages, he would not be competitive. The answer to his dilemma, he felt, was "to work smarter (through self-managed teams) and to have smarter workers."

Since the overwhelming majority of firms do not offer workplace education programs, it seems reasonable to explore the question of why. It is not due to a lack of awareness. Only 4 percent of small business employers in Michigan who responded to our survey reported that none of their workers had basic skills difficulties, and none of the respondents felt that basic skills were "not important" or "not very important" to firm productivity and profits. In short, it seems as though employers are aware of basic skills problems. When we asked employers explicitly why they were not offering programs, only 5 percent responded that they have never considered the issue.

The responses to our query as to why firms were not offering programs could be categorized into the following two groups:

- Firms that somewhat considered the issue, but need more information about:
  - — need among workers
  - — how to set up a program
- Firms that seriously considered the issue and decided not to offer a program because:
  - — basic skills not a problem
  - — lack of resources (i.e., too expensive, too much release time)
  - — negative opinions about workplace education programs (i.e., not effective, not employer's responsibility, workers quit after training)

About one-third of the firms without a program could be classified in the first group. These firms responded that they either needed more information about the precise extent of skills deficiencies among their workforce or about how to set up a program that would fit their needs. For the other two-thirds of respondents, the largest number of responses were by employers who indicated that basic skills were not a problem among their hourly employees. More than half of the firms without education programs, predominantly in nonmanufacturing, did not perceive basic skills to be a serious problem in their firm. The smallest share of responses were by employers who had considered the issue, but had negative opinions about workplace education programs. Finally, a significant share of firms cited resource concerns; this was a major concern among manufacturers.

It is interesting that about one-quarter of firms without programs indicated they would like to implement a workplace education program. This is a striking percentage, although the proportion may be affected by response bias.

Characteristics of Workplace Education Programs

Table 1 presents a summary of the characteristics of workplace education programs as reported by firms in the mail survey. The data in this table come from firms with programs, so it is likely that the information is free of response bias and is generalizable to all Michigan small business firms with programs.

The preponderance of these programs (over 80 percent) provide release time for employees to attend[4] and a like percentage are offered at the worksite. A little over half of the programs are voluntary. A plurality of the programs are not regularly scheduled (meet as needed or as can be arranged), but among programs scheduled on a regular basis, the median frequency is about twice per week.

The firms were almost perfectly split between those using an in-house employee as the instructor (in almost all cases on a paid basis) and those using an external party as the instructor. In the latter case, instructors were either independent consultants or teachers from a community college or adult education department of a school system.[5]

The skills reported to be taught generally matched the areas of greatest need. Table 1 shows that problemsolving was taught in almost 85 percent of the programs; interpersonal skills in about 70 percent of the programs; mathematics in over half of the programs; and reading, writing, or other English skills in a minority of the programs.

Examining the program attributes by industry sector shows few significant differences between manufacturing and nonmanufacturing firms. Manufacturing firms were more likely to provide financial support to their programs and to sponsor GED courses. However, sample sizes are quite modest, and most of the differences lack statistical significance.

A very important characteristic of programs is the financial cost. As a general rule, the costs that firms bear are quite modest. In our survey data, the mean out-of-pocket expense for a program was $14,525; and the firms' costs ranged from $0 to $50,000. These costs included payments to instructors, release time paid to employees, and costs of materials and facilities. These costs are, in general, underestimates of the *total* cost, since most firms operate their programs in partnership with an educational institution, and usually that institution bears fixed costs such as curriculum

Table 1
Attributes of Workplace Education Programs, by Sector

	Non-manufacturing	Percent[a]	Manufacturing	Percent[a]	Number of Firms	Percent[a]
Have workplace program	15	15.3	38	26.6	53	22.0
Voluntary participation	9	60.0	20	55.6	29	56.9
Taught at worksite	12	80.0	30	83.3	42	82.4
Release time provided	13	86.7	29	78.4	42	80.8
Financial support provided	12	80.0	37	97.4*	49	92.5
Skills taught:						
Mathematics	3	21.4	27	73.0*	30	58.8
English as 2nd language	1	6.7	1	2.8	2	3.9
Reading and writing	5	35.7	14	38.9	19	38.0
Standard GED curriculum	0	0.0	10	27.0*	10	19.6
Problemsolving	13	92.9	29	78.4	42	82.4
Interpersonal skills	11	73.3	23	63.9	34	66.7
Type of instructor:						
In-house paid teacher	7	77.8	8	32.0	15	44.1
Contracted teacher	1	11.1	6	24.0	7	20.6
Company volunteer	0	0.0	4	16.0	4	11.8
Community college teacher	0	0.0	1	4.0	1	2.9
Adult education teacher	0	0.0	3	12.0	3	8.8
Private consultant	0	0.0	1	4.0	1	2.9
Technical school instructor	0	0.0	1	4.0	1	2.9
Other	1	11.1	1	4.0	2	5.9

SOURCE; Michigan sample of firms (n=251) from a national survey of small businesses conducted by Southport Institute for Policy Analysis.
NOTE: Asterisks (*) indicate a statistically significant difference in the workplace education characteristic between manufacturing and nonmanufacturing at the 0.05 level of significance.
a. Percentages are based on responses to the item and not on total with a program.

development. Furthermore, the federal government will subsidize, from Adult Education funds, the basic skills instructional costs of any individual 16 years old or older who has not completed high school or its equivalent. On the other hand, the reported costs may be an overestimate of what it costs to operate a program, because they may include one-time remodeling and refurbishing costs associated with providing space for workplace education activities.

Impact of Workplace Education Programs

Workplace education programs represent an investment by employers in the human capital of their employees. As such, it is important to examine the impacts that such programs are having on each party.

The employees who participated in our case studies felt very insecure about their jobs and feel very underpaid. These perceptions seem valid. A striking number of companies rely on temporary help agencies to achieve labor flexibility, and layoffs have been endemic to Michigan manufacturing for the last few years. We collected considerable data on wages and benefits and found, for example, that mean wage rates for production workers in small businesses are approximately $6.50 - $8.00 per hour. Many employers acknowledge that wage rates are low, but they feel squeezed by the limits of competitive pressures.

Employees participating in workplace education programs generally acknowledge their skills deficiencies and are looking to education to improve their job security and to lead to higher wages. Ironically, while these economic outcomes are not happening in general, another unexpected outcome is occurring almost universally: Participating employees all cite improved self-confidence and self-esteem as a result of the programs. These sorts of payoffs are important to participants and lead them to continued participation. Still, some impatience is expressed with the fact that education has not led to immediate improvements in job security or tangible wage increases.

Table 2 presents a more quantitative evaluation of the improvement in worker skills and attitudes as a result of workplace education programs, as reported by a small sample of employers who have operated a program for an extended period.[6] The table categorizes outcomes into worker basic skill improvements, worker attitudes, and company outcomes. The first six rows in the table are basic skills categories, and workers in these firms showed the

greatest gains in communications and mathematics. Writing and problemsolving skills showed more modest gains. In terms of worker attitudes and job skills (the next seven categories), the areas of self-confidence, morale, and teamwork improved most. Company loyalty, work effort, independent work ability, and ability to use technology showed somewhat smaller gains. Finally, among company outcomes, output quality exhibited a modest gain and all other outcomes showed very little impact.

Table 2
Index of Improvement in Worker Skills from Workplace Education Programs

	Mean Improved Score[a]	Number of Respondents
Basic Skills		
Reading	1.6	8
Writing	1.8	8
Mathematics	2.2	11
English	1.0	3
Problemsolving	1.8	12
Communication	2.3	12
Employee Attitudes and Job Skills		
Work effort	1.7	11
Company loyalty	1.9	13
Employee morale	2.1	13
Independent work ability	1.8	13
Teamwork	2.0	13
Ability to use technology	1.4	13
Self-confidence	2.3	13
Company Outcomes		
Retention of employees	1.0	12
Absenteeism/lateness	1.1	13
Advancement (promotions)	1.4	13
Worker safety	1.3	11
Output quality	1.7	13
Customer satisfaction	1.5	13
Scrap/error rates	1.3	11
Productivity	1.2	13

SOURCE: Detailed telephone follow-up survey to firms (n=14) in Michigan sample of firms in a national survey of small businesses conducted by Southport Institute for Policy Analysis. Firms who responded that they had a workplace education program were given the follow-up survey.

a. Mean calculated from a scale where "no improvement"=0, "very little improvement"=1, "moderate amount"=2, and "very much"=3.

To put it succinctly, employers want an engaged, problem-solving workforce. They want production workers to understand the overall nature of the business, to be able to troubleshoot and solve problems, and to be able to communicate effectively with each other and with management. Having literate workers *per se* is not usually their goal. Having workers who are productively on task, who are flexible, who can easily adapt to changing circumstances, and who know how to solve problems are their goals.

Education and training are seen by some employers as means to their objectives. It is our impression, however, that employers have not fully embraced workplace education as a solution. Very few managers have taken the time or shown the interest to get involved in actual curriculum and instructional decisions. One southwestern Michigan firm with a very well-established, well-operated program dissolved the program altogether in a cost-cutting move.

We speculate that the primary reason for the broad but shallow support of education by employers is simply the lack of evidence of tangible payoffs. Some employers have mentioned this concern explicitly. When a new machine is installed, increased output flows or new products are immediately seen. Emphasis on quality generally results in fewer rejected parts, or reworks, and again, is tangible. But improving the basic skills of workers lacks tangibility.

Policy Recommendations

Workplace education appears to be a private activity between employers and their employees. However, there are clearly social costs to having a labor force deficient in basic skills. Individual unemployment may result from basic skills deficiencies, and society provides support in the form of unemployment compensation and bears the cost of forgone tax receipts. Even among employed workers there are social costs. Firms are not operating at capacity and are not able to adopt technological advances to maintain their competitiveness. Because of these social costs, there seems to be a role for government in workplace education.

One role that government might play would be to provide financial assistance to firms to establish programs. These programs are of modest cost, in general, but some employers still perceive resources to be a major barrier to implementation. The State of Illinois offers "mini-grants" of up to $10,000 to employers for the purpose of workplace literacy training, which may be a useful model for other states to follow.

In our opinion, a more important role that the State of Michigan might play would be to provide information to employers in the form of technical assistance on issues such as worker assessment, finding providers, developing curricula and instructional methods, and logistics such as scheduling and facilities. South Carolina has established regional workplace education specialists, whose duties involve outreach and information provision to employers. A less expensive means of providing information might be to develop an informational brochure or catalog, which could be given to all employers, listing education providers in an employer's general location and giving information about other potential resources employers could access.

Finally, both state and federal agencies should consider expanding the rather minute amount of research underway to quantify the productivity gains to workplace education. The future competitiveness of the nation's industrial base may rest, in no small part, on the workplace training of our workforce. Many firms maintain a wealth of information on individual productivity, but do not have the resources or capability to analyze this information with statistical rigor. Research that maintains the confidentiality of these data can and should be undertaken to gauge the precise monetary benefits of workplace education.

NOTES

1. For example, a recent *Wall Street Journal* article concerned the "Big 3" automobile companies ("At GM, the Three Rs Are the Big Three," *Wall Street Journal*, June 1992), and a recent report on CBS Evening News (7/13/92) presented a program at Motorola.

2. These percentages have considerable overlap and duplication, so they may not be added together.

3. While the Quickstart program has been phased out, Michigan does currently offer its Michigan Training Incentive (MTI), which is a loan program with an interest subsidy, and in January 1993, the Engler administration will initiate the Adult Education Alternative Training program.

4. A popular option for release time is to pay employees for one hour for each two hours of program attendance. This is a way for both employer and employee to invest in the program.

5. Adult education professionals wince at the prospect of calling an in-house employee an instructor, and there is some debate as to whether such a program should really be classified as workplace education. In those instances where we observed in-house staff in the role of instructor, it was always the case that these individuals had participated in additional training in the subject matter prior to teaching other employees and always exhibited pedagogical concerns such as organization and clarity of presentation, student evaluation, and providing additional assistance to employees who needed it. Thus, we have little difficulty in characterizing these situations as workplace education.

6. The reader is cautioned that the data in Table 2 are based on a very small sample and should be regarded as anecdotal.

Kevin Hollenbeck is Senior Economist, William Anderson is Project Associate, and Ken Kline is Research Analyst at the Upjohn Institute. The Upjohn Institute's project on *Workplace Education in Small and Medium-Sized Firms in Michigan* was funded by Southport Institute for Policy Analysis, whose support is gratefully acknowledged.

For more information about workplace education, the reader is referred to three recent publications of Southport Institute for Policy Analysis:

Forrest P. Chisman, *The Missing Link: Workplace Education in Small Business* (Washington, DC: Southport Institute for Policy Analysis), 1992.

Laurie J. Bassi, *Smart Workers, Smart Work: A Survey of Small Businesses on Workplace Education and Reorganization of Work* (Washington, DC: Southport Institute for Policy Analysis), 1992.

Thomas E. Faison, Mary P. Vencill, J. William McVey, Kevin M. Hollenbeck, and William C. Anderson, *Ahead of the Curve: Basic Skills Programs in Four Exceptional Firms* (Washington, DC: Southport Institute for Policy Analysis), 1992.

For readers interested in learning of the experiences of a firm operating an exemplary workplace education program, contact Jack Neal or Greg Arvanigian of Arvco Container Corporation, Kalamazoo, MI.

The BUSINESS OUTLOOK for WEST MICHIGAN

Manufacturing Provides Stability as Confidence Wanes

George A. Erickcek

Total employment fell a slight 0.1 percent in the metropolitan areas of West Michigan during the second quarter of 1992. Falling interest rates have not stemmed the waning consumer confidence resulting from disappointing employment growth. Although the national recovery has slowed to a crawl, the nation's manufacturing sector continues to expand. Moreover, that national trend in manufacturing should lead to further job growth in the West Michigan area in the coming months.

The National Setting

After rising at a 2.9 percent annual rate in the first quarter of 1992, the nation's Gross Domestic Product (GDP) slowed to a disappointing 1.4 percent annual rate in the second quarter. The restocking of inventories was the major activity of the second quarter, as final sales grew at a meager 0.3 percent annual rate. Falling consumer confidence caused by a lack of job growth has quieted expectations of a stronger recovery. The Federal Reserve Board is sending mixed messages, while the President and Congress are pinned by the growing national deficit. While the other sectors of the national economy have fizzled, manufacturing continues to trudge onwards.

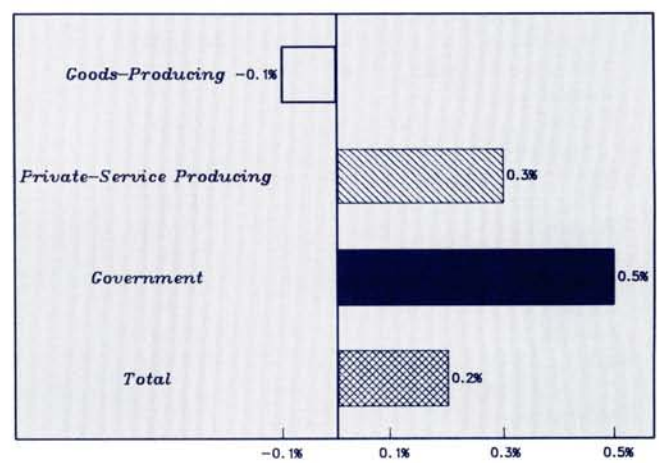
Consumers could not sustain their robust first-quarter buying spree in the second quarter. Consumer expenditures fell at a slight 0.3 percent annual rate in the second quarter, a far cry from the 5.1 percent annual growth rate experienced in the previous quarter. The decline in consumer spending was felt hardest in consumer durables, which fell at a 2.7 percent annual rate in the second quarter.

Car sales have improved over last year's dismal levels; however, they are not as strong as many had hoped. Sales were up 9.6 percent over last year's levels for the last 10 days in July, but then declined in early August. Production levels as of early August were up just 4.2 percent over last year's levels.

Consumer spending on nondurable goods was down in the second quarter, falling at an annual rate of 1.6 percent. Consumer spending on services, however, continued to grow at a 1.0 percent annual rate.

Reduced consumer confidence over the past several months was indicated by The Conference Board's Index of Consumer Confidence falling 11.6 points in July and was echoed by a smaller 3.5 point drop in the University of Michigan's Index of Consumer Sentiment. Consumers must be troubled by the nation's anemic employment growth. The national unemployment rate climbed to 7.8 percent in June, falling slightly to 7.7 percent in July. The number of payroll jobs increased by 198,000 in July, after plunging 117,000 in June; however, 60,000 of the new jobs in July were due to an emergency federal jobs program for unemployed teenagers.

Chart 1
United States Employment
Percentage Change, Second Quarter 1992



SOURCE: U.S. Department of Labor.

Growth in real disposable personal income also slowed in the second quarter. After rising at a 4.0 percent annual rate in the first quarter, income growth slowed to a lackluster 0.7 percent annual rate in the second.

Table 1
Michigan (Statewide) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	1,031,090	1,030,150	0.1	1,026,880	0.4
Construction & mining	126,200	126,860	-0.5	129,920	-2.9
Manufacturing	904,880	903,290	0.2	896,960	0.9
Durable goods	669,980	670,690	-0.1	669,010	0.1
Nondurable goods	234,900	232,600	1.0	227,950	3.0
Private service producing	2,201,770	2,208,230	-0.3	2,207,230	-0.2
Transportation & pub. utilities	156,780	156,530	0.2	156,070	0.5
Wholesale trade	194,690	194,650	0.0	198,450	-1.9
Retail trade	720,390	724,730	-0.6	729,750	-1.3
Finance, insurance & real estate	188,740	189,520	-0.4	189,090	-0.2
Services	941,170	942,800	-0.2	933,880	0.8
Government	628,860	628,000	0.1	631,420	-0.4
Total	**3,861,710**	**3,866,380**	**-0.1**	**3,865,530**	**-0.1**
Unemployment					
Number unemployed	408,520	420,460	-2.8	425,170	-3.9
Unemployment rate	8.9	9.1	-2.2	9.3	-4.3
State indexes					
Help-wanted ads:					
Detroit	105	94	11.7	94	11.7
West Michigan (5 MSAs)	205	196	4.6	179	14.5
Leading indicators	137	133	3.0	120	14.2
Local components:					
Average weekly hours	42.0	42.2	-0.5	41.2	1.9
UI initial claims	23,306	23,220	0.4	31,166	-25.2
New dwelling units[a]	40,582	37,537	8.1	33,993	19.4

SOURCES: W.E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, Detroit help-wanted index from The Conference Board and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

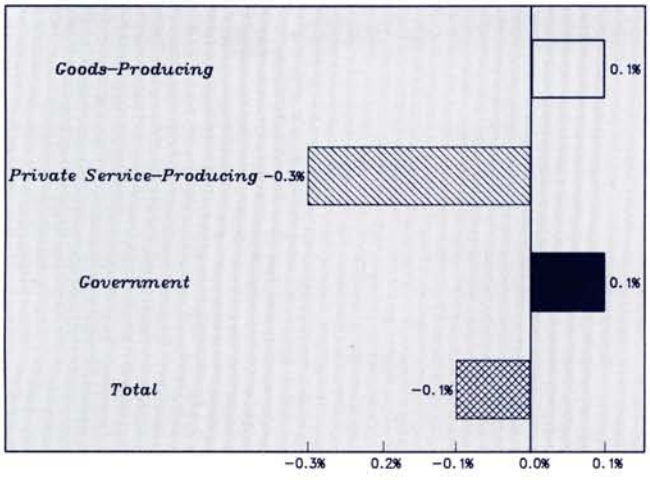
Table 2
West Michigan (5 MSAs) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	204,310	204,730	-0.2	205,550	-0.6
Construction & mining	24,810	24,690	0.5	25,130	-1.3
Manufacturing	179,500	180,040	-0.3	180,420	-0.5
Durable goods	110,720	111,770	-0.9	112,770	-1.8
Nondurable goods	68,780	68,280	0.7	67,640	1.7
Private service producing	368,280	367,790	0.1	366,210	0.6
Transportation & pub. utilities	23,400	23,420	-0.1	23,390	0.0
Wholesale trade	37,980	37,890	0.2	37,600	1.0
Retail trade	124,380	123,930	0.4	123,970	0.3
Finance, insurance & real estate	29,640	29,650	0.0	29,540	0.3
Services	152,880	152,910	0.0	151,710	0.8
Government	82,900	83,540	-0.8	82,910	0.0
Total	**655,480**	**656,060**	**-0.1**	**654,670**	**0.1**
Unemployment					
Number unemployed	55,320	56,450	-2.0	56,030	-1.3
Unemployment rate	7.7	7.8	-1.3	7.9	-2.5
Local indexes					
Help-wanted ads	205	196	4.6	179	14.5
Leading indicators	133	127	4.7	117	13.7
Local components:					
Average weekly hours	41.6	41.0	1.5	40.5	2.7
UI initial claims	2,872	2,934	-2.1	3,481	-17.5
New dwelling units[a]	6,867	5,861	17.2	5,499	24.9

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad counts from five daily newspapers and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Unfortunately, we are getting little support from our trading partners. Germany's strong anti-inflation policy has sent its interest rates to their highest levels in over 50 years and has cooled the typically robust German economy. The economies of most of our other major trading partners are also listless. As a result, our exports fell at a 3.8 percent annual rate in the second quarter, despite a relatively cheap dollar. Forecasters are predicting the economies of our trading partners will remain sluggish during the next six months, at least. Hence, although the value of the dollar is expected to fall relative to most major currencies in the coming months, exports may still suffer due to a general reduction in foreign demand.

Chart 2
Michigan Employment
Percentage Change, Second Quarter 1992



SOURCES: Based on U.S. Department of Labor and Michigan Employment Security Commission data.

Imports, on the other hand, grew at a 6.3 percent annual rate in the second quarter. Imports may continue to outrace exports as the United States market, such as it is, remains the best in the global economy.

The falling dollar has made "Made in America" a bargain. In the auto industry, foreign transplants are increasing their purchases from American suppliers because it is becoming too expensive to ship parts from abroad. Import substitution is becoming just as important as expanding exports for the continued health of our manufacturing base.

Indeed, the nation's manufacturing sector is one of the few rays of light on our economic horizon. The National Association of Purchasing Management's Index rose to 54.2 percent in July, indicating that the manufacturing sector is continuing to grow. An Index reading greater than 50.0 suggests an expanding manufacturing sector. Continuing the positive indications provided by the Index, factory shipments were up 2.4 percent in June.

The Federal Reserve's relentless assault on interest rates has pulled down the prime rate to 6 percent. Moreover, 30-year fixed-rate mortgages have dipped below 8 percent. Encouraged by these low interest rates, nonresidential investment spending rose at a 13.5 percent annual rate in the second quarter, and residential investment increased at an 8.7 percent annual rate. Home sales jumped 7.9 percent in June.

The jump in nonresidential investment was caused entirely by a rush in orders for machines and equipment. Spending on producers' durable equipment increased at a robust 20.7 percent annual rate in the second quarter. Commercial and industrial construction is still depressed, however; spending on nonresidential structures fell at a 2.1 percent annual rate in the second quarter.

In June, the national Index of Leading Indicators fell 0.2 percent, its first decline in six months. Unfortunately, the government cannot be relied on to turn the economy around. Federal spending has come to a standstill due to cutbacks in military expenditures. Given the federal debt and further planned cuts in military expenditures, an expansionary fiscal policy is not in the cards.

The Federal Reserve, on the other hand, appears to be conducting an expansionary policy by cutting interest rates over the past two years. At the same time, however, it has allowed the growth in the money supply to become stagnant. The real money supply as measured by M2, in fact, fell 1.2 percent in the 12 months ending in May. The lack of growth in the money supply can be partially explained by a host of factors, including the reinvesting of funds into non-money instruments (stocks and bonds) and the continuing efforts of many of the national banks to shore up assets. Yet, given the struggling economy and low inflationary pressure, it is surprising that the Fed hasn't pumped more money into the economy.

Outlook for Michigan

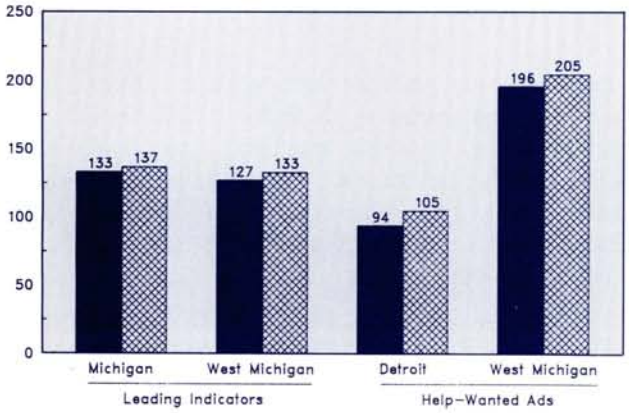
Total employment fell a tiny 0.1 percent statewide in the second quarter of 1992. Employment gains in the state's somewhat revived manufacturing sector could not overcome declines in the state's private service-producing sectors. Despite disappointing auto sales, employment conditions in the state's manufacturing and service sectors should improve slightly in the coming months.

Employment in the state's goods-producing sector rose a scant 0.1 percent in the second quarter, held down by a 0.5 percent decline in construction and mining employment. Manufacturing employment rose 0.2 percent, due to a

robust 1.0 percent employment jump in the state's nondurable goods manufacturing sector.

Chrysler and Ford posted second-quarter net incomes of $178 million and $502 million, respectively; however, General Motors lost $357 million due to a one-time restructuring cost of $749 million at its subsidiary, Hughes Aircraft. In light of improving sales, General Motors officials may postpone until next year identifying the seven remaining plants slated for closing.

Chart 3
Michigan and West Michigan Indexes
First Quarter ■ 1992 and Second Quarter ☒ 1992
(1982=100)



Many parts suppliers have become very uneasy due to the selection of J. Ignacio Lopez de Arriortua as GM's new vice-president of world marketing. Mr. Lopez was very effective in lowering suppliers' costs for GM in Europe. Since his arrival in the United States, Mr. Lopez has already called in 500 of GM's largest suppliers and told them GM will reopen existing contracts. In-house (GM's Automotive Components Group) and outside suppliers will be competing on equal footing for GM contracts *worldwide*. Mr. Lopez has abandoned GM's 3-2-2 plan, which required suppliers to cut 3 percent off their price the first year, followed by 2 percent price reductions in the following two years. Instead, he is asking for double-digit cost cuts in the first year. For Michigan auto suppliers, GM's new strategy offers the carrot of being able to bid on European contracts along with a howitzer of much lower prices for their parts.

Employment in the state's private service-producing industries fell 0.3 percent in the second quarter, canceling out its identical percentage growth in the first quarter. Retail trade employment fell a sharp 0.6 percent in the second quarter, reflecting the nationwide reduction in consumer spending. There were also declines in employment in the financial, insurance and real estate sector and the services sector during the quarter. Government employment rose 0.1 percent.

The state's unemployment rate fell to 8.9 percent in the second quarter from 9.1 percent in the previous period, but moved upward again to 9.4 percent in July due to a sharp increase in the labor force. Statewide employment grew by 19,000 in July, but the number of people looking for work rose by a larger 33,000.

The short-term employment outlook for Michigan is positive, due in part to the strength of the nation's manufacturing sector. The Detroit Index of Help-Wanted Advertising shot up 11.7 percent in the second quarter, and the statewide Index of Leading Indicators moved upward 3.0 percent, suggesting improving employment conditions across most industries.

Although the state's Index of Leading Indicators rose, two of the three state components deteriorated. Average weekly hours of production workers was off by 0.5 percent and the number of initial claims for unemployment insurance increased 0.4 percent. The remaining statewide component, the number of new dwelling units put under contract, rose a healthy 8.1 percent.

Outlook for West Michigan

Total employment fell a tiny 0.1 percent in the five metropolitan areas of West Michigan during the second quarter of 1992. Modest employment gains in the region's private service-producing industries were erased by declines in the region's goods-producing and government sectors. In the coming months, employment conditions should improve in the region's goods- and service-producing sectors.

Employment in the region's goods-producing sector fell slightly, due to a 0.3 percent drop in manufacturing. Falling interest rates apparently stimulated increased residential construction as employment in that sector grew by 0.5 percent. The number of new dwelling units put under contract rose 17.2 percent in the quarter.

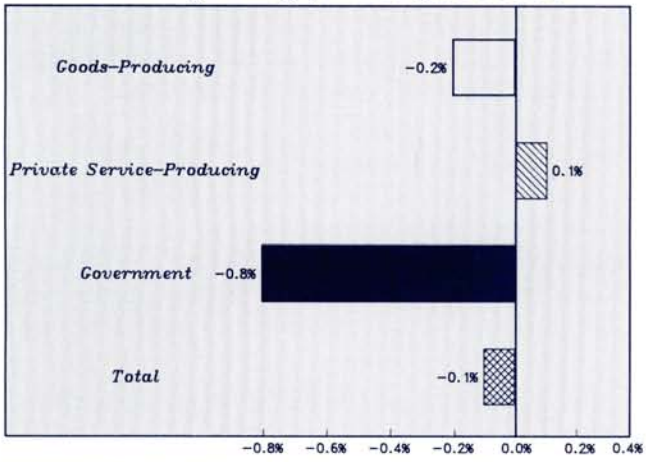
Employment declines in manufacturing were centered in the region's durable goods sector, where employment fell 0.9 percent, erasing a 0.7 percent gain in the region's nondurable goods employment.

According to the July surveys of the local chapters of the National Association of Purchasing Management, the regional manufacturing base continues to grow. The New

Order Index of the Southwestern Michigan chapter which covers the Kalamazoo-Battle Creek area was up 15, while the Grand Rapids area reading was up 20. The Index is the difference between the percentage of firms reporting an increase in new orders and those reporting a decline.

While many of the region's auto suppliers are weary of GM's new efforts to slash supplier prices, several are reporting success in selling to Japanese transplants and to the international market. Benteler Industries, for example, received an order from Nissan Motors to produce exhaust manifolds for the Nissan's VG 30 engine. The falling value of the dollar and GM's opening of its European markets to U.S. suppliers could bring additional work to the region's more competitive auto suppliers.

Chart 4
West Michigan Employment
Percentage Change, Second Quarter 1992



SOURCE: Based on Michigan Employment Security Commission data for 5 MSAs in West Michigan.

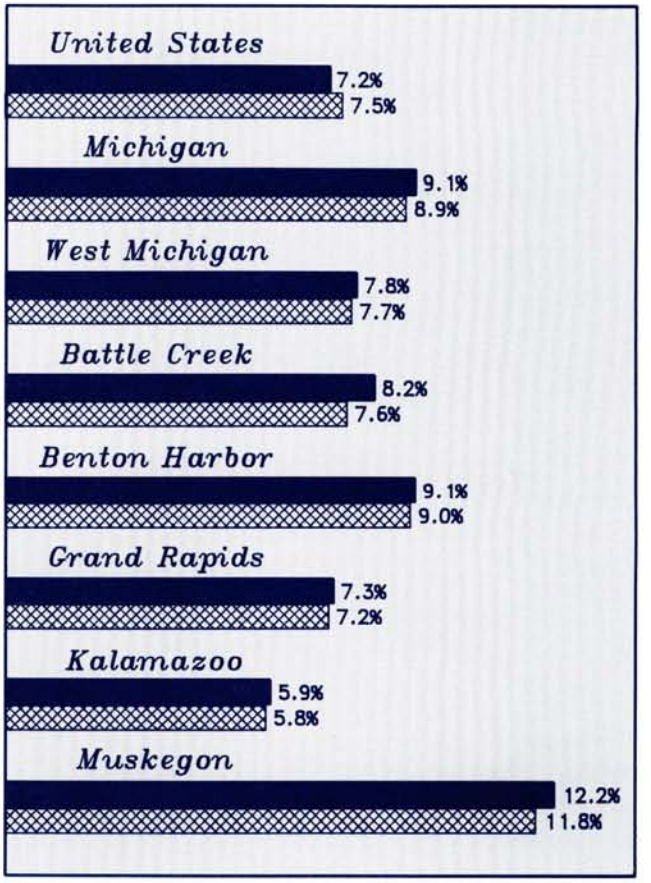
Employment in the region's private service-producing sector rose 0.1 percent. In sharp contrast to national and state trends, retail employment grew 0.4 percent in the region during the second quarter. The greatest gains were seen in Muskegon and Grand Rapids, suggesting that tourist activity along Lake Michigan may have been stronger than normal in May and June. Employment in government was down 0.8 percent in the quarter.

The region's unemployment rate inched down to 7.7 percent, matching the national rate for July, and is significantly below the state rate of 8.9 percent, despite the fact that both areas shared the same tiny drop in total employment.

The employment outlook for the region's goods- and service-producing sectors is fairly positive. The layoff of 200 workers at Autodie in Grand Rapids may mask the generally improving employment picture in manufacturing, however. The region's Index of Leading Indicators rose 4.7 percent and the composite Index of Help-Wanted Advertising was up a similar 4.6 percent in the second quarter.

All three of the regional components of the Index of Leading Indicators were up in the second quarter. In addition to the jump in the number of new dwellings put under contract, average weekly hours worked by production workers rose 1.5 percent, and the number of new claims for unemployment insurance fell 2.1 percent.

Chart 5
Unemployment Rates
First Quarter ■ 1992 and Second Quarter ☒ 1992

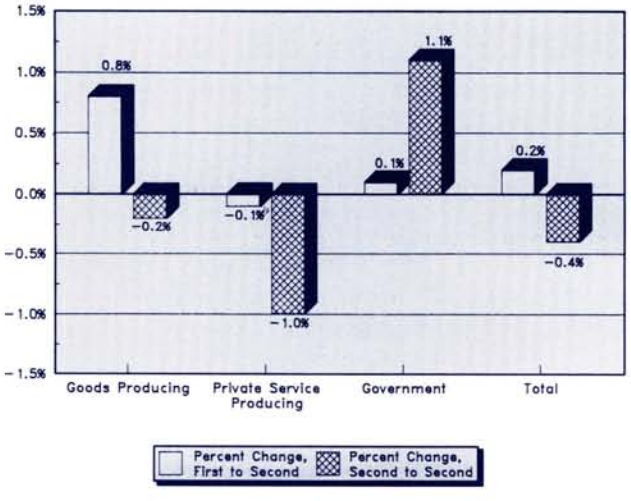


The BUSINESS OUTLOOK for the BATTLE CREEK MSA

Total employment inched up 0.2 percent in the second quarter of 1992 in the Battle Creek MSA, powered by a robust manufacturing sector. Further employment growth is expected in the area's manufacturing sector; however, employment conditions in the area's service-producing industries are expected to decline slightly.

Employment in the area's goods-producing industries jumped 0.8 percent in the second quarter, due to a strong employment growth in both construction and manufacturing. Employment in construction rose 0.5 percent, as the number of new dwellings put under contract rose a sharp 36.6 percent.

Chart BC-1
Battle Creek Employment
Percentage Change



Manufacturing employment rose 0.8 percent. Due to renewed hiring in the area's large food processing sector, employment leaped 1.7 percent in nondurable goods production, after falling 1.0 percent in the previous quarter. Employment in the area's durable goods manufacturing sector was off 0.3 percent in the second quarter, after climbing 1.9 percent in the previous quarter. However, II Stanley, an auto supply manufacturer, announced plans to add 150 new jobs within two years.

Employment in the area's private service-producing industries was off 0.1 percent. Strong employment gains in finance, insurance, and real estate, and wholesale trade were erased by employment reductions in the area's services and transportation sectors. Included in employment losses in the services sector is the continuing downsizing at Battle Creek Adventist Hospital.

Employment in the area's transportation and wholesale sector will grow, based on announced expansion plans of AMT Freight Incorporated, located in the Fort Custer Industrial Park. Currently employing about 80 workers, the warehousing, freight-forwarding, and light assembly company has plans to hire about 60 workers by year's end.

The area's unemployment rate in the second quarter dropped to 7.6 percent, substantially below the state's rate of 8.9 percent. Although total employment growth in the area was only slightly higher than the state's in the second quarter, employment growth in its goods-producing sector clearly outdistanced the state's minor 0.1 percent increase.

The employment outlook for the area is mixed. Further employment growth in the area's goods-producing sector is suggested by the strong 8.7 percent increase in the area's Index of Leading Indicators, but a 7.1 percent decline in the area's Index of Help-Wanted Advertising indicates sluggish conditions will remain in its service-producing sectors.

All three of the local components of the area's Index of Leading Indicators advanced in the second quarter. Average weekly hours worked by production workers rose a healthy 1.6 percent, while initial claims for unemployment insurance plunged by 8.3 percent. As mentioned above, the number of new dwelling units put under contract rose.

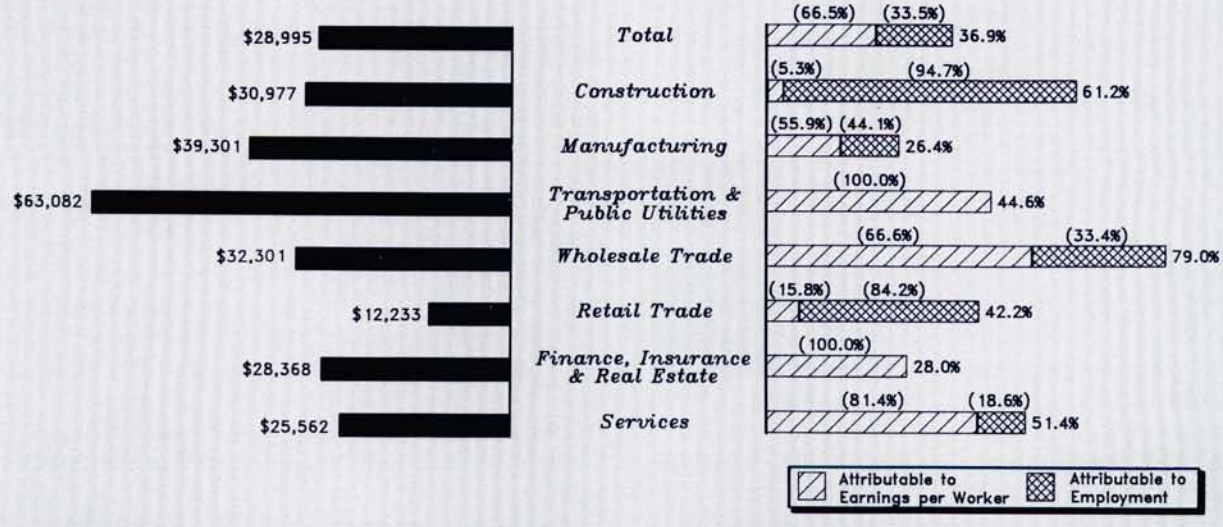
Finally, 11 Japanese companies have contributed a total of $100,000 for the establishment of a day-care facility for employees of firms located in the Fort Custer Industrial Park. Another $45,000 needs to be raised from other businesses in the park for the facility to open. The facility would be open from 5 a.m. to midnight, in order to serve employees working day or evening shifts.

Table BC-1
Battle Creek (Calhoun County) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	17,840	17,700	0.8	17,870	-0.2
Construction & mining	2,090	2,080	0.5	2,150	-2.8
Manufacturing	15,750	15,620	0.8	15.710	0.3
Durable goods	7,430	7,450	-0.3	7,390	0.5
Nondurable goods	8,320	8,180	1.7	8,320	0.0
Private service producing	29,920	29,940	-0.1	30,230	-1.0
Transportation & pub. utilities	1,820	1,830	-0.5	1,820	0.0
Wholesale trade	1,770	1,750	1.1	1,770	0.0
Retail trade	11,520	11,520	0.0	11,520	0.0
Finance, insurance & real estate	3,260	3,220	1.2	3,290	-0.9
Services	11,560	11,610	-0.4	11,830	-2.3
Government	11,130	11,120	0.1	11,010	1.1
Total	**58,890**	**58,760**	**0.2**	**59,100**	**-0.4**
Unemployment					
Number unemployed	4,820	5,210	-7.5	5,520	-12.7
Unemployment rate	7.6	8.2	-7.3	8.7	-12.6
Local indexes					
Help-wanted ads	130	140	-7.1	132	-1.5
Leading indicators	150	138	8.7	127	18.1
Local components:					
Average weekly hours	43.5	42.8	1.6	41.7	4.3
UI initial claims	342	373	-8.3	431	-20.6
New dwelling units[a]	583	427	36.6	414	40.8

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Battle Creek Enquirer* and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Battle Creek MSA
Growth in Nominal Earnings, 1985-1990



Earnings per Worker equals the sum of wage and salary disbursement, other labor income including employers' contribution to pension funds, and proprietors' income for the industry divided by the industry's wage and salary employment.

Growth in Earnings is the change in nominal earnings from 1985 to 1990 by industry. The contribution to the growth in earnings made by increased earnings per worker and/or growth in the number of workers are shown in parentheses.

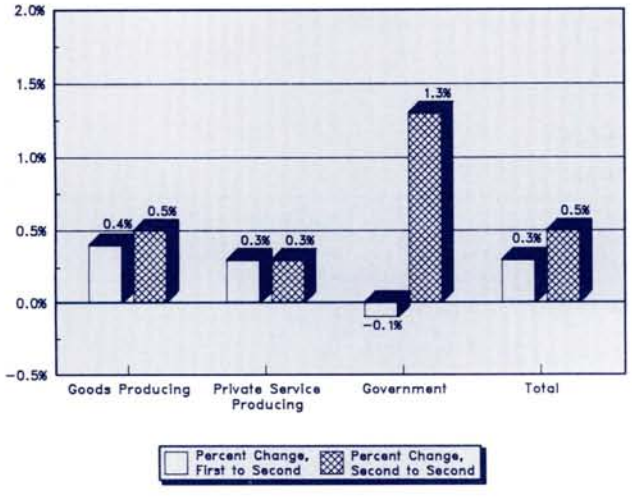
Growth in nominal earnings per worker accounted for two-thirds of the 37 percent increase in total earnings in the Battle Creek MSA from 1985 to 1990. Earnings per worker in transportation and public utilities was over two times greater than average in 1990, and earnings growth in the industry, during the five-year period, was due solely to an increase in earnings per worker. On the other hand, earnings growth in construction and retail trade was due mostly to increases in employment and not the growth of earnings per worker.

The BUSINESS OUTLOOK for the BENTON HARBOR MSA

Total employment grew 0.3 percent in the Benton Harbor MSA during the second quarter of 1992. Employment gains were recorded across all the area's major industrial sectors. Employment growth is expected to continue in the area's goods-producing sector, but little growth is foreseen in its larger private services sectors.

Employment in the area's goods-producing sector rose 0.4 percent, due to employment gains in both construction and manufacturing. Falling interest rates contributed to an 8.7 percent increase in the number of new dwelling units put under contract in the second quarter. Employment in construction rose 0.5 percent.

Chart BH-1
Benton Harbor Employment
Percentage Change



Employment in manufacturing increased 0.4 percent in the quarter, after falling 0.5 percent in the previous quarter. Employment gains in durable goods production more than offset a modest employment reduction in the area's smaller nondurable goods sector.

Recent employment reports are not positive, however. Comstock Michigan Fruit will eliminate 140 full-time and 50 to 100 part-time jobs in the fall when it closes its Sodus plant. Dunlop Automotive Composites, which opened just last fall, is shutting down, and its 36 employees will be laid off. To the north, Du-Wel Products in Van Buren County announced it could lay off up to 150 workers by closing its Hartford plant and reducing staff at its Bangor facility.

On the positive side, Whirlpool announced its plans to build a $2 million, 50,000-square-foot building in the new Elisha Gray II Enterprise Part for Commerce and Technology. No new jobs will be created, however.

Employment in the area's private service-producing sector rose 0.3 percent as gains in services in finance, insurance, and real estate, and in transportation and public utilities countered employment declines in retail and wholesale trade. Finally, employment in government fell a tiny 0.1 percent.

The area's unemployment rate inched down to 9.0 percent in the second quarter. Although the area's jobless rate nearly matched that of the state, its overall employment performance in the quarter was better than the state's sluggish growth. In particular, the area's private service-producing sector grew by the same percent, 0.3, that the state declined.

Aside from the announced layoffs at the Comstock Michigan Fruit Company and Dunlop, employment conditions in the Berrien County manufacturing sector should improve in the coming months. The area's Index of Leading Indicators, which monitors employment conditions in the area's goods-producing sector, rose 4.0 percent in the second quarter. However, the area's Index of Help-Wanted Advertising fell 1.1 percent, suggesting stagnant employment conditions in its service-producing sector.

All three of the local components of the area's Index of Leading Indicators improved in the quarter. Average weekly hours of production workers increased a robust 2.5 percent, while the number of new claims for unemployment insurance dropped 3.5 percent. Finally, the number of new dwelling units put under contract also rose nicely in the quarter.

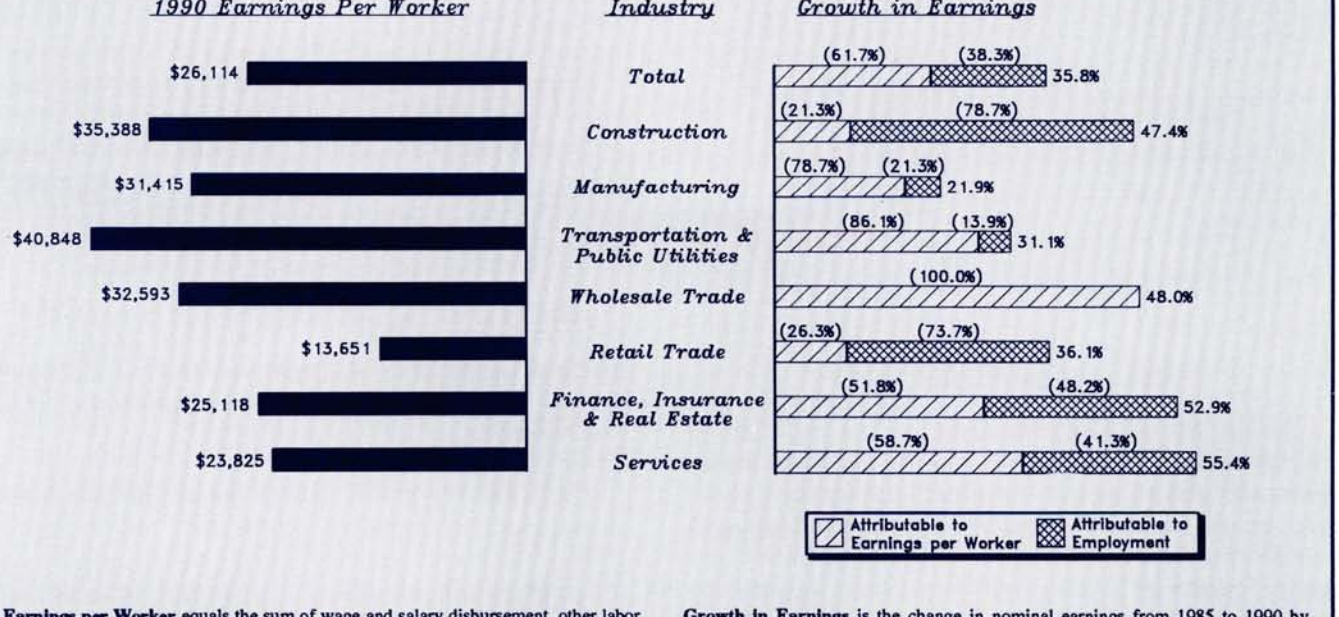
Lake Michigan College was awarded a two-year business and international education grant from the U.S. Department of Education to provide training for local businesses interested in international trade. The college is planning to establish an International Business Center, which will offer seminars, workshops, and conferences on export-related issues.

Table BH-1
Benton Harbor (Berrien County) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	22,530	22,430	0.4	22,410	0.5
Construction & mining	1,900	1,890	0.5	1,850	2.7
Manufacturing	20,630	20,540	0.4	20,560	0.3
Durable goods	14,890	14,790	0.7	14,910	-0.1
Nondurable goods	5,740	5,760	-0.3	5,650	1.6
Private service producing	34,980	34,880	0.3	34,880	0.3
Transportation & pub. utilities	2,760	2,740	0.7	2,720	1.5
Wholesale trade	2,410	2,430	-0.8	2,410	0.0
Retail trade	11,300	11,310	-0.1	11,440	-1.2
Finance, insurance & real estate	2,720	2,690	1.1	2,720	0.0
Services	15,800	15,710	0.6	15,590	1.3
Government	9,210	9,220	-0.1	9,090	1.3
Total	**66,720**	**66,530**	**0.3**	**66,380**	**0.5**
Unemployment					
Number unemployed	7,190	7,190	0.0	7,290	-1.4
Unemployment rate	9.0	9.1	-1.1	9.3	-3.2
Local indexes					
Help-wanted ads	265	268	-1.1	190	39.5
Leading indicators	130	125	4.0	108	20.4
Local components:					
Average weekly hours	41.8	40.8	2.5	40.9	2.2
UI initial claims	307	318	-3.5	388	-20.9
New dwelling units[a]	625	575	8.7	311	101.2

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Benton Harbor Herald Palladium* and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Benton Harbor MSA
Growth in Nominal Earnings, 1985-1990



Earnings per Worker equals the sum of wage and salary disbursement, other labor income including employers' contribution to pension funds, and proprietors' income for the industry divided by the industry's wage and salary employment.

Growth in Earnings is the change in nominal earnings from 1985 to 1990 by industry. The contribution to the growth in earnings made by increased earnings per worker and/or growth in the number of workers are shown in parentheses.

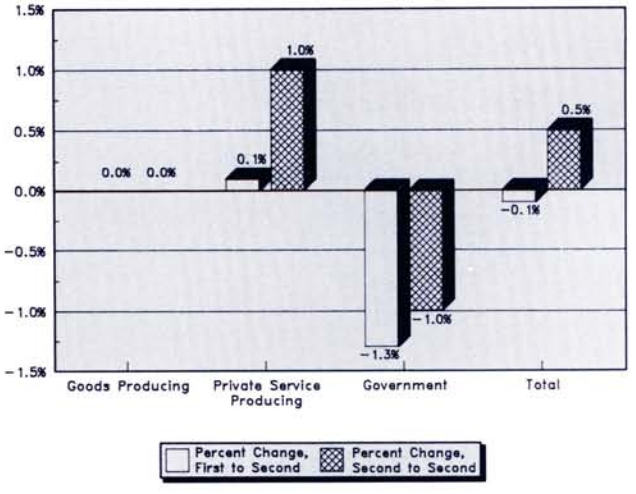
From 1985 to 1990, nominal earnings grew nearly 36 percent in the Benton Harbor MSA. Overall, growth in earnings per worker accounted for 61.7 percent of the growth in nominal earnings; although in wholesale trade, manufacturing, and transportation it accounted for much larger shares of industry earnings growth. In 1990, earnings per worker was lowest in retail trade, where employment growth accounted for nearly three-quarters of the industry's growth in earnings.

The BUSINESS OUTLOOK for the GRAND RAPIDS MSA

Total employment remained stable during the second quarter in the Grand Rapids MSA (Kent and Ottawa Counties), falling just 0.1 percent. Improving employment conditions are expected in the coming months in the area's service-producing sector. However, the partial closure of Autodie and its elimination of over 200 jobs will probably drag the area's manufacturing employment statistics into negative territory in the third quarter.

Area employment in goods-producing industries remained unchanged in the second quarter. Renewed construction activity triggered by lower interest rates resulted in a 1.1 percent employment jump in construction. Employment in the area's manufacturing sector, however, fell a scant 0.1 percent in the quarter, as employment declines in durable goods production erased a 0.9 percent gain in nondurable goods employment.

Chart GR-1
Grand Rapids Employment
Percentage Change



In July, Autodie Corporation, an industry leader in the making of large-scale stamping dies and molds, closed its doors and pink-slipped its remaining 400 workers. However, in mid-August, 190 workers were called back to finish an order for General Motors. The company has been struggling for nearly three years, under a heavy debt accumulated during its rapid expansion in the late 1980s.

The partial closure of Autodie overshadows what had been a fairly positive quarter. Holland American Wafer announced expansion plans that will add 60 jobs. Smiths Industries—Aerospace and Defense Systems won a contract supplying navigation equipment to a Russian aircraft builder. Finally, Bristol-Meyers Squibb announced it will build a $115 million infant formula plant in Zeeland, creating up to 150 jobs.

In contrast to Autodie, many of the area's other auto suppliers have been doing well. Benteler picked up new orders from Nissan. Lacks Industries, a plastics automotive trim producer, announced a $6.3 million expansion which could result in 80 new jobs. Gentex, the Zeeland-based manufacturer of automatic dimming rearview mirrors, reported a record 1,400 percent net income increase in its second quarter.

In the area's office furniture industry, Haworth announced that it is moving its Mueller office furniture production from Grand Rapids to High Point, North Carolina, affecting 115 workers. American Seating began a $12 million expansion, which will keep the furniture manufacturer in Grand Rapids. Finally, Herman Miller suffered an 8.4 percent decline in annual sales last year for the first time since becoming a public company 22 years ago. Nevertheless, the furniture maker announced expansion plans are scheduled for three of its subsidiaries, all located in Spring Lake (Ottawa County).

Employment in the area's private service-producing sector inched up just 0.1 percent in the second quarter. Growth in tourism-related retail employment offset declines in most of the other sectors. However, Gantos, a clothing retailer, announced the permanent layoff of 86 office employees. Employment in government fell 1.3 percent in the quarter.

The area's unemployment rate dropped to 7.2 percent in the second quarter. While the Grand Rapids MSA's unemployment rate remained below the state's rate of 8.9 percent, the area' second-quarter employment growth was no better than the state's.

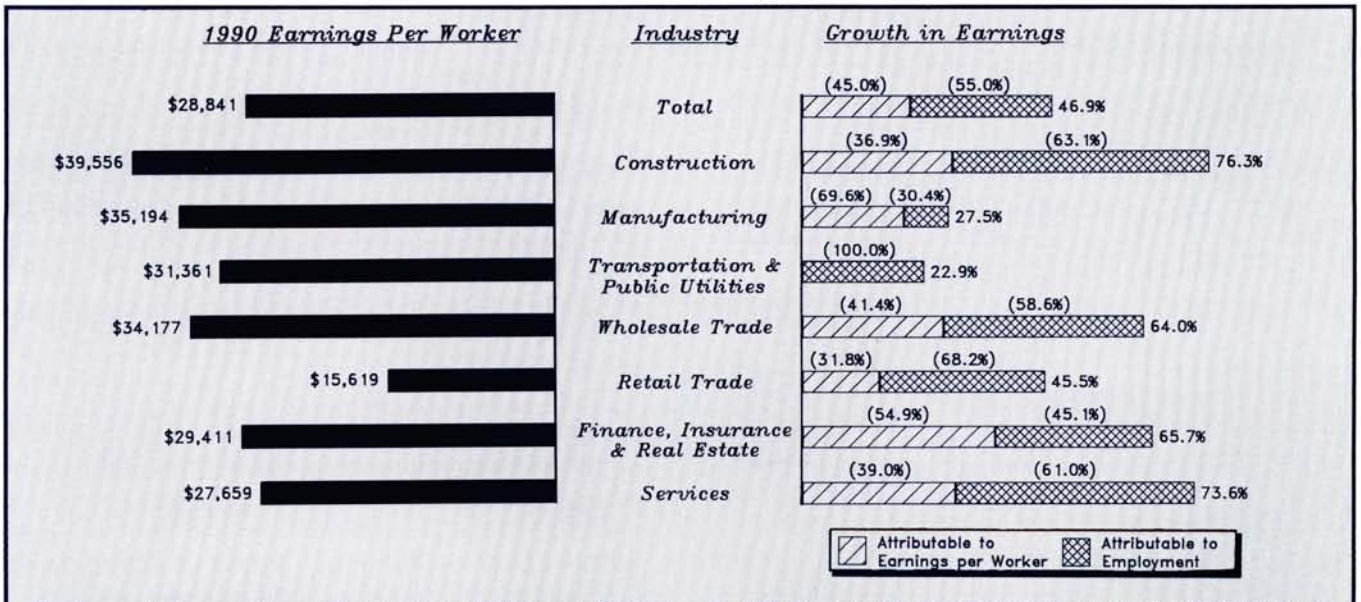
The layoff at Autodie clouds what would have been a strong employment outlook for the area. Still, improving employment conditions in the service-producing sectors are suggested by a strong 9.9 percent jump in its Index of Help-Wanted Advertising. Moreover, the employment impact of Autodie's cutback will be buffered by improving employment conditions in the area's other goods-producing industries. The area's Index of Leading Indicators rose 4.1 percent, as all three local components of the Index improved in the second quarter.

Table GR-1
Grand Rapids (Kent & Ottawa Counties) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	115,820	115,810	0.0	115,850	0.0
Construction & mining	15,410	15,240	1.1	15,520	-0.7
Manufacturing	100,420	100,570	-0.1	100,340	0.1
Durable goods	65,630	66,100	-0.7	66,570	-1.4
Nondurable goods	34,780	34,480	0.9	33,770	3.0
Private service producing	210,060	209,810	0.1	207,910	1.0
Transportation & pub. utilities	13,410	13,470	-0.4	13,580	-1.3
Wholesale trade	27,190	27,090	0.4	26,820	1.4
Retail trade	68,820	68,540	0.4	67,770	1.5
Finance, insurance & real estate	16,080	16,040	0.2	15,880	1.3
Services	84,570	84,670	-0.1	83,860	0.8
Government	35,000	35,460	-1.3	35,340	-1.0
Total	**360,890**	**361,080**	**-0.1**	**359,100**	**0.5**
Unemployment					
Number unemployed	28,140	28,650	-1.8	27,700	1.6
Unemployment rate	7.2	7.3	-1.4	7.3	-1.4
Local indexes					
Help-wanted ads	234	213	9.9	198	18.2
Leading indicators	126	121	4.1	114	10.5
Local components:					
Average weekly hours	40.9	40.7	0.5	40.0	2.2
UI initial claims	1,436	1,444	-0.6	1,689	-15.0
New dwelling units[a]	3,971	3,348	18.6	3,614	9.9

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Grand Rapids Press* and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Grand Rapids MSA
Growth in Nominal Earnings, 1985-1990



Earnings per Worker equals the sum of wage and salary disbursement, other labor income including employers' contribution to pension funds, and proprietors' income for the industry divided by the industry's wage and salary employment.

Growth in Earnings is the change in nominal earnings from 1985 to 1990 by industry. The contribution to the growth in earnings made by increased earnings per worker and/or growth in the number of workers are shown in parentheses.

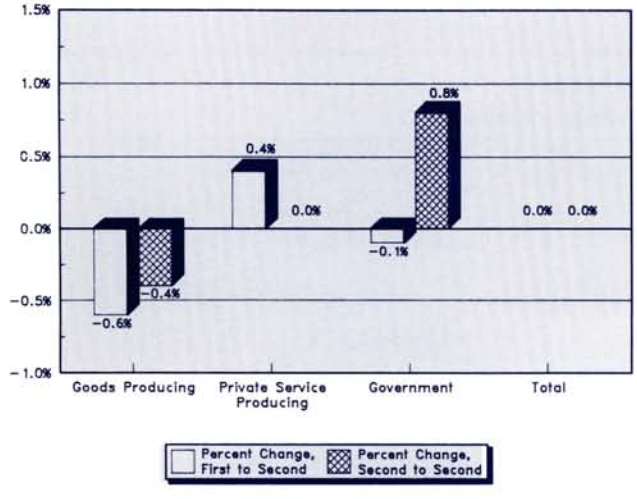
From 1985 to 1990, nominal earnings increased nearly 47 percent in the Grand Rapids MSA, with employment growth accounting for 55 percent of the overall earnings growth. Nominal earnings grew over 75 percent in the area's construction industry, as the industry's earnings per worker reached nearly $40,000 in 1990. Only in manufacturing did the growth in earnings per worker explain a lion's share of the total growth in earnings during the five-year period.

The BUSINESS OUTLOOK for the KALAMAZOO MSA

Total employment did not budge in the Kalamazoo MSA in the second quarter of 1992. Employment declines in the area's goods-producing sectors were offset by gains in its private service-producing industries. Employment conditions are expected to improve in the coming months across all industries, although two of the area's largest employers are reducing their workforce levels through attrition.

Employment in the area's goods-producing sector fell 0.6 percent in the second quarter, more than erasing a 0.3 percent rise in the previous quarter. A 25 percent jump in the number of new dwelling units put under contract did not stop construction employment from declining 0.6 percent in the quarter.

Chart K-1
Kalamazoo Employment
Percentage Change



Manufacturing employment was also down 0.6 percent due to a 1.5 percent employment drop in durable goods production. Employment in the area's more active nondurable goods sector inched up by 0.1 percent. Summit Polymers announced plans for a $3.1 million expansion, creating 49 new jobs within two years. In Allegan County, the Perrigo Company announced a $25.5 million expansion of its corporate headquarters in the City of Allegan. Nearly 300 new jobs will be created by 1994.

The Upjohn Company announced two expansion projects: a $14.9 million building expansion to house production of its cholesterol-lowering drug, Colestid, and a $25.5 million addition to its bulk steroid finishing facility. Few jobs will be generated by the expansion, however. In May, the company announced a short-lived hiring and salary freeze, which was followed by a voluntary early retirement program which was accepted by nearly 500 employees.

Employment in the area's private service-producing sector rose 0.4 percent in the second quarter, matching last quarter's percent increase. Across the board, employment gains were more than enough to counter a 1.3 percent decline in the area's finance, insurance, and real estate sector.

Government employment was down 0.1 percent in the quarter. Western Michigan University announced a hiring freeze due to a projected $5.1 million deficit caused by a lack of growth in enrollment and state financial support.

Unemployment fell in the quarter, dropping the area's unemployment rate to a very low 5.8 percent in the quarter. Not only is the area's unemployment rate substantially below that of the state, but the area outperformed the state in the second quarter in overall employment growth. The area's manufacturing sector proved weaker than the state's, but this was made up by the strong employment performance in the area's private service-producing sector.

The employment outlook for the Kalamazoo MSA is positive, despite employment reductions at Upjohn and the University. The local Index of Help-Wanted Advertising moved up 5.6 percent, while the area's Index of Leading Indicators increased 4.2 percent. The upward movement of both Indexes suggests improving employment conditions across all industries in the coming months.

The local components of the area's Index of Leading Indicators were mixed. Average weekly hours of production workers rose a strong 2.6 percent, and the number of new dwelling units put under contract rose 24.7 percent. On the downside, the number of new claims for unemployment insurance rose 2.0 percent in the quarter.

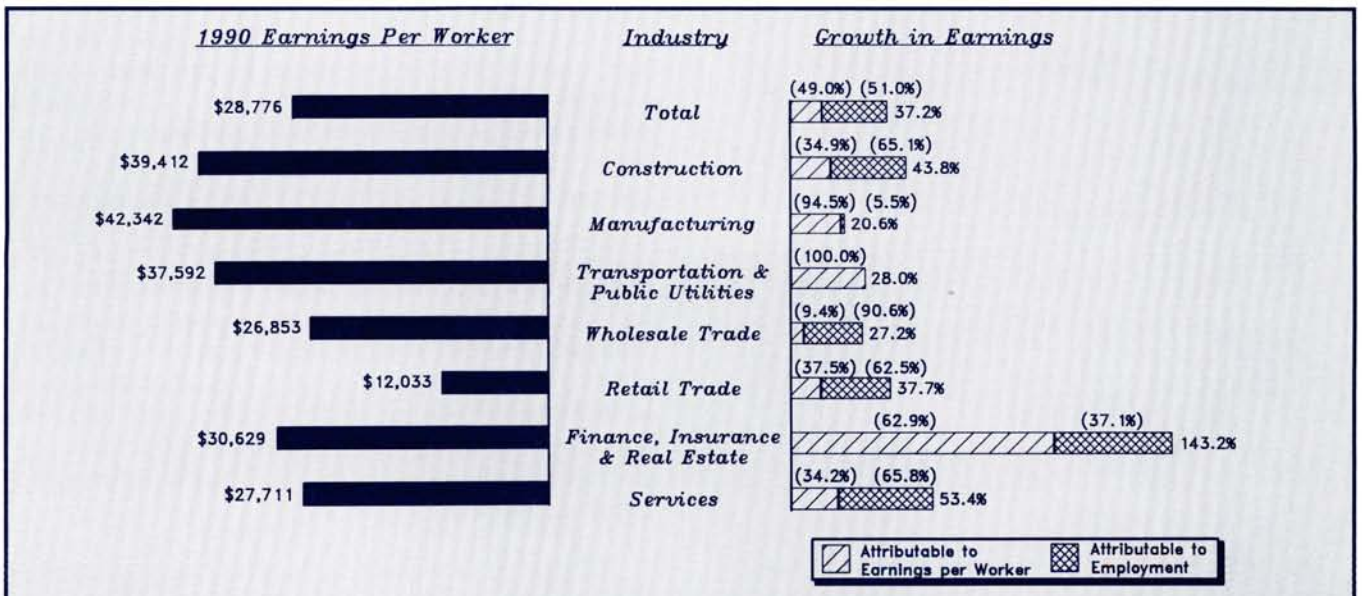
Finally, Kalamazoo's downtown Arcadia Commons project received a shot in the arm when the Governor approved $3.55 million for Kalamazoo Valley Community College's downtown campus. The funding was a key element for the multi-faceted project to proceed.

Table K-1
Kalamazoo (Kalamazoo County) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	31,330	31,510	-0.6	31,470	-0.4
Construction & mining	3,270	3,290	-0.6	3,470	-5.8
Manufacturing	28,050	28,220	-0.6	28,000	0.2
Durable goods	11,280	11,450	-1.5	11,330	-0.4
Nondurable goods	16,780	16,770	0.1	16,670	0.7
Private service producing	62,920	62,700	0.4	62,940	0.0
Transportation & pub. utilities	3,210	3,200	0.3	3,150	1.9
Wholesale trade	4,490	4,460	0.7	4,490	0.0
Retail trade	20,690	20,650	0.2	21,180	-2.3
Finance, insurance & real estate	5,990	6,070	-1.3	6,100	-1.8
Services	28,530	28,310	0.8	28,020	1.8
Government	18,260	18,270	-0.1	18,110	0.8
Total	**112,500**	**112,480**	**0.0**	**112,520**	**0.0**
Unemployment					
Number unemployed	6,950	7,080	-1.8	7,070	-1.7
Unemployment rate	5.8	5.9	-1.7	6.0	-3.3
Local indexes					
Help-wanted ads	190	180	5.6	173	9.8
Leading indicators	125	120	4.2	109	14.7
Local components:					
Average weekly hours	42.9	41.8	2.6	41.6	3.1
UI initial claims	365	358	2.0	465	-21.5
New dwelling units[a]	1,043	836	24.7	700	48.9

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F. W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Kalamazoo Gazette* and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Kalamazoo MSA
Growth in Nominal Earnings, 1985-1990



Earnings per Worker equals the sum of wage and salary disbursement, other labor income including employers' contribution to pension funds, and proprietors' income for the industry divided by the industry's wage and salary employment.

Growth in Earnings is the change in nominal earnings from 1985 to 1990 by industry. The contribution to the growth in earnings made by increased earnings per worker and/or growth in the number of workers are shown in parentheses.

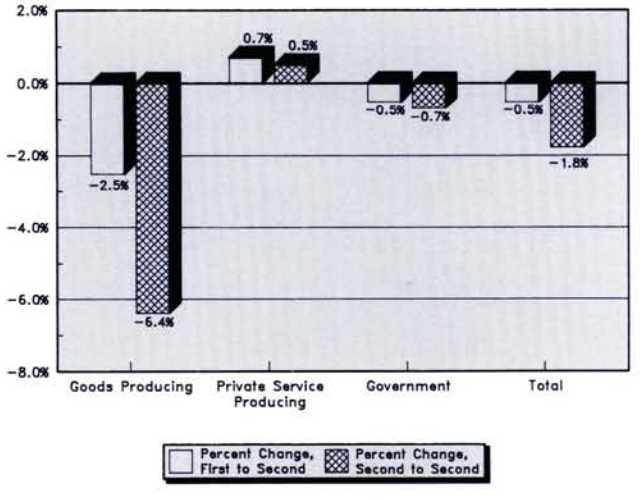
Growth in employment and in earnings per worker were equally important in accounting for the 37.2 percent rise in nominal earnings in the Kalamazoo MSA from 1985 to 1990. Total earnings soared 143.2 percent in finance, insurance, and real estate. In general, industries with substantial growth in earnings per worker during the five-year period had higher earnings per worker in 1990 than those depending upon greater employment levels to drive total earnings.

The BUSINESS OUTLOOK for the MUSKEGON MSA

Total employment fell 0.5 percent in the Muskegon MSA during the second quarter of 1992. Declines in manufacturing employment erased employment gains in the area's service-producing sector. In the coming months, employment conditions in the area's struggling manufacturing sector should turn around; however, employment growth in its service-producing sector may slow.

Employment in the area's goods-producing industries fell 2.5 percent in the second quarter. Despite an 8.0 percent increase in the number of new dwelling units put under contract in the quarter, construction employment was off 0.9 percent. Manufacturing employment declined 2.7 percent in the quarter, due to a 3.5 percent drop in employment in durable goods manufacturing, centered in the area's industrial machinery and equipment industry. Employment in the area's smaller nondurable goods-producing sector was up 0.3 percent.

Chart M-1
Muskegon Employment
Percentage Change



The local economy is being battered by cuts in military expenditures. For instance, R.A. Miller Industries laid off 50 workers due to the loss of a military contract. R.A. Miller designs, tests, and produces high-technology antennas for communications, navigation, and radar. In addition, Howmet Corporation, citing declining military spending and plunging commercial aircraft sales, announced a corporate-wide restructuring plan that could move the company's ceramic division in Whitehall to a facility in Tennessee, a decision that could cost Muskegon County about 300 jobs.

Fortunately, the Defense Department decided to continue a five-year $342 million contract with Teledyne Continental Motors. The decision saves 150 jobs at the company's new Norton Shores technical center and 50 support jobs at its Getty Street plant.

Employment in the area's service-producing sector rose a healthy 0.7 percent in the second quarter. Employment growth was propelled by strong gains in transportation and public utilities and the area's tourist-related retail sectors. Moreover, both sectors received good news in the quarter. GTE-North announced that it will consolidate a switch-monitoring unit in Muskegon, a move that will bring 53 new jobs to the area. In addition, Elder-Beerman Company announced plans to open a 70,000-square-foot department store at the downtown Muskegon Mall.

The area's unemployment rate fell to 11.8 percent in the second quarter, but still remains much higher than the state's rate of 8.9 percent. Worse yet, the area's overall employment performance was below the marginal Michigan performance, due solely to job losses in manufacturing. The area's service-producing sector posted the largest percentage increase of all five metropolitan areas in the quarter.

The short-term employment outlook for the area is mixed. Below-average temperatures will probably cool hiring plans of the area's tourism industries during the fall. Moreover, the area's Index of Help-Wanted Advertising fell 4.8 percent, suggesting a slowdown in employment growth in the service-producing sector. On the other hand, the area's Index of Leading Indicators was up 3.9 percent, suggesting improving employment conditions in its struggling manufacturing sector.

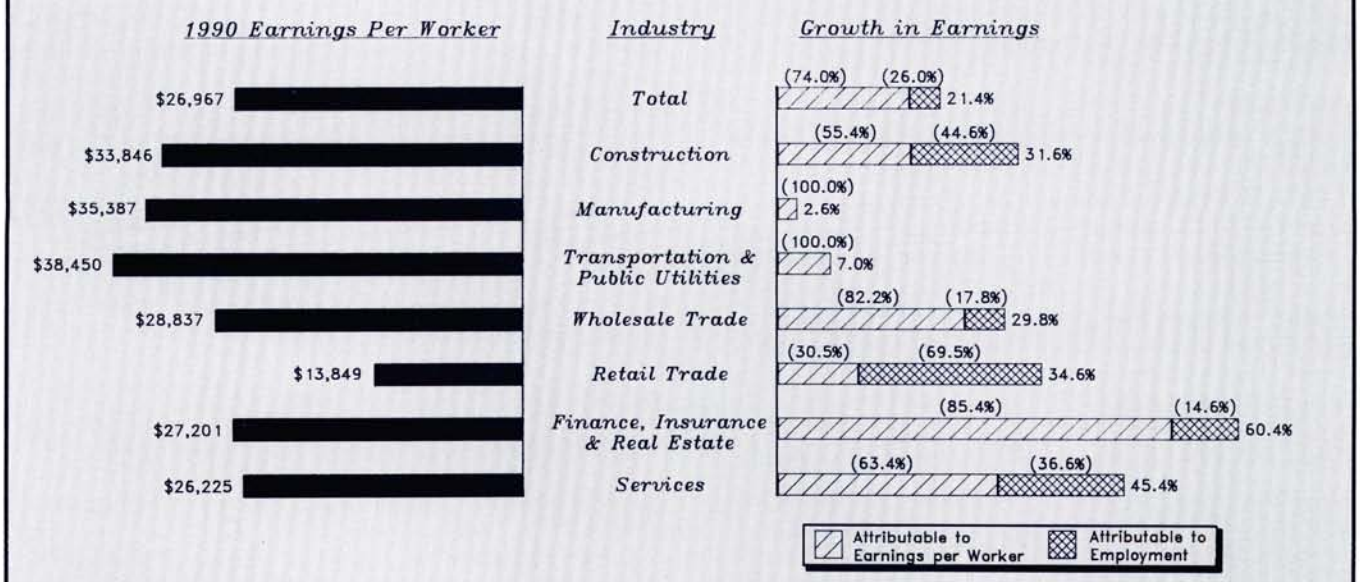
The local components of the Index of Leading Indicators were mixed. New claims for unemployment insurance were down 9.4 percent in the quarter and the number of new dwelling units put under contract were up 8.0 percent. However, average weekly hours of production workers was down 2.0 percent.

Table M-1
Muskegon (Muskegon County) Statistics
(Adjusted for seasonal variations)

Measure	1992 second quarter	1992 first quarter	Percent change first to second	1991 second quarter	Percent change second to second
Employment					
Goods producing	16,810	17,240	-2.5	17,960	-6.4
Construction & mining	2,150	2,170	-0.9	2,140	0.5
Manufacturing	14,660	15,070	-2.7	15,820	-7.3
Durable goods	11,550	11,970	-3.5	12,640	-8.6
Nondurable goods	3,110	3,100	0.3	3,180	-2.2
Private service producing	30,480	30,270	0.7	30,320	0.5
Transportation & pub. utilities	2,200	2,170	1.4	2,140	2.8
Wholesale trade	2,140	2,120	0.9	2,100	1.9
Retail trade	12,070	11,880	1.6	12,040	0.2
Finance, insurance & real estate	1,600	1,610	-0.6	1,570	1.9
Services	12,480	12,500	-0.2	12,480	0.0
Government	9,390	9,440	-0.5	9,460	-0.7
Total	**56,680**	**56,950**	**-0.5**	**57,740**	**-1.8**
Unemployment					
Number unemployed	7,910	8,310	-4.8	8,150	-2.9
Unemployment rate	11.8	12.2	-3.3	12.0	-1.7
Local indexes					
Help-wanted ads	157	165	-4.8	158	-0.6
Leading indicators	134	129	3.9	117	14.5
Local components:					
Average weekly hours	39.4	40.2	-2.0	40.4	-2.5
UI initial claims	406	448	-9.4	490	-17.1
New dwelling units[a]	685	634	8.0	482	42.0

SOURCES: W. E. Upjohn Institute for Employment Research. Based on dwelling data from F.W. Dodge Division, McGraw Hill Information Systems Company, ad count from *Muskegon Chronicle* and employment data from MESC. National components in Table A-3.
NOTE: Categories may not sum to total due to rounding.
a. New dwelling unit data are seasonally adjusted annual rates.

Muskegon MSA
Growth in Nominal Earnings, 1985-1990



Earnings per Worker equals the sum of wage and salary disbursement, other labor income including employers' contribution to pension funds, and proprietors' income for the industry divided by the industry's wage and salary employment.

Growth in Earnings is the change in nominal earnings from 1985 to 1990 by industry. The contribution to the growth in earnings made by increased earnings per worker and/or growth in the number of workers are shown in parentheses.

Nominal earnings for the Muskegon MSA grew 21.4 percent from 1985 to 1990, and growth in earnings per worker accounted for nearly 75 percent of the growth. In manufacturing and in transportation and public utilities, industries with the highest earnings per worker in 1990, increased earnings per worker accounted for all of the growth in nominal earnings.

Definition of Terms

Business Cycle Turning Dates

The Historical business cycle turning dates used in this report are those designated by the National Bureau of Economic Research, Inc. (NBER). They mark the approximate dates when, according to NBER, aggregate economic activity reached its cyclical high (peak) or low (trough) levels.

Employment

In this quarterly, "employment" is used instead of the more precise term, "wage and salary employment." The MESC employment data shown refer to "jobs by place of work," or nonagricultural employment.

Goods Producing: The estimate of the number of workers on the payrolls of privately owned firms engaged in the production of durable or nondurable goods, construction and mining.

Private Service Producing: The estimate of the number of workers on the payrolls of privately owned firms that provide services rather than goods.

Government: The estimate of the number of workers on national, state, or local governmental payrolls.

Index of Leading Indicators, United States

A (composite) index based on 11 major components. Marginal employment adjustment measures include average weekly hours in manufacturing employment and average weekly initial UI claims. One of the two job vacancy series is Help-Wanted Advertising. New private housing units are part of the fixed capital investment component. For a complete list see *Survey of Current Business* and the 1984 *Handbook of Cyclical Indicators*. The U.S. Department of Commerce, Bureau of Economic Analysis.

Initial Claims

A count of the number of new claims filed for unemployment insurance (UI) for regular state programs. Each initial claim filed indicates a new spell of unemployment for an experienced workers. In Michigan, to be eligible for benefits, an individual must have earned wages of at least 30 times the state minimum hourly wage during not less than 20 of the 52 consecutive calendar weeks preceding the benefit year. Each such week is termed a "credit week." An individual may qualify with as few as 14 credit weeks, however, if base period wages have been in excess of 20 times the state average weekly wage.

Michigan Employment Security Commission (MESC)

Michigan Employment Security Commission is a state agency that administers the Job Service and the state/federal unemployment insurance programs and provides labor market information in keeping with state and federal reporting requirements.

MSA (1983 definition)

In all but New England, one or more counties are defined as a Metropolitan Statistical Area if they contain the following: a large population nucleus (a central city or "urbanized" area) with adjacent communities which have a high degree of economic and social integration. Adjacent counties are included if they have 60 persons per square mile, and/or substantial 1970 to 1980 population growth (20 percent) with 10 percent residing within the urbanized area and a commuting pattern with 15-20 percent of residents working within the central city or urbanized area.

MSAs are also defined as major labor market areas by the Michigan Employment Security Commission (MESC). Those labor market areas outside of the MSAs have the peninsula or county name.

National Association of Purchasing Management Selected Components Indexed

The NAPM conducts a monthly survey of purchasing managers from a scientifically selected sample of firms across the nation. Responses indicate only the direction of change; the percentage reporting favorable changes minus those with unfavorable changes plus 100 equals the index as shown in this quarterly. For those familiar with diffusion indexes, these indexes represent two times the percentage reporting a change in a favorable direction, e.g., more new orders. (The favorable count includes one--half of those reporting no change.)

Time Series

A set of numbers covering a known interval or timespan (e.g., months or quarters) that provide information about a well-defined activity, process or group. For local series that consistently change direction in advance of overall economic activity, see Table A-3. Those measuring current or past economic activity are found in Table A-4.

Unemployed

The number of persons in the labor force who are without a job or on layoff but not expecting to be called back. In order to be counted, an individual must be seeking work.

Vacancy Rate

The percentage of all housing units in existing homes or newly constructed units (visibly ready for occupancy) that are empty and therefore unoccupied. Vacancy rates in Michigan MSAs are determined by U.S. Postage Service delivery workers as part of an annual survey conducted for the Federal Home Loan Bank of Indianapolis and the 1990 Census. See Table A-5

Table A-1
Index of Help-Wanted Advertising (1982=100)

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	134	233	234	217	176	135	132	133	135	140	130
Benton Harbor MSA	100	273	309	305	295	225	190	219	243	268	265
Grand Rapids MSA	144	281	314	309	275	207	198	198	201	213	234
Kalamazoo MSA	140	263	296	298	244	173	173	170	169	180	190
Muskegon MSA	123	189	203	192	198	155	158	152	144	165	157
West Michigan, 5 MSAs	100	260	288	283	249	187	179	180	183	196	205
Detroit, Michigan MSA	50	172	177	170	135	95	94	100	90	94	105
United States	138	196	216	208	177	128	130	124	122	124	125

SOURCES: West Michigan indexes based on ad counts from the *Battle Creek Enquirer, Benton Harbor Herald Palladium, Grand Rapids Press, Kalamazoo Gazette* and *Muskegon Chronicle*; United States and Detroit indexes derived from (1967=100) series of The Conference Board.

Table A-2
Index of Leading Indicators (1982=100)
(Rounded)

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	123	140	145	136	143	133	127	140	141	138	150
Benton Harbor MSA	100	133	135	124	125	114	108	119	121	125	130
Grand Rapids MSA	119	142	143	133	130	117	114	121	119	121	126
Kalamazoo MSA	122	133	138	126	123	114	109	119	117	120	125
Muskegon MSA	125	137	141	134	132	124	117	131	129	129	134
West Michigan, 5 MSAs	100	145	148	138	137	122	117	126	125	127	133
Michigan	122	154	153	142	141	125	120	130	130	133	137

SOURCES: National index from U.S. Department of Commerce, all others from the W.E. Upjohn Institute.

Technical Note

As presently constituted, the components and the range of weights used in the Indexes of Leading Indicators are as follows:

1. *Average weekly hours of production workers in manufacturing.* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .32 to .46.
2. *Initial claims for unemployment insurance (inverted).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .09 to .13.
3. *New dwelling units put under contract (4-term trailing average).* A separate series is used for each metropolitan area and for the State of Michigan. Weights range from .03 to .11.

In addition, each area's index includes the following national measures:

4. *The proportion of firms reporting an increase in new orders.* Weights range from .10 to .13.
5. *The proportion of firms reporting an increase in purchased materials prices.* Weights range from .09 to .13.
6. *The proportion of firms reporting an increase in purchased materials inventories.* Weights range from .09 to .12.
7. *The proportion of firms reporting a change in vendor performance (slower delivery time).* Weights range from .09 to .13.

Table A-3
Components of the Index of Leading Indicators

1. Average Weekly Hours of Production Workers

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	41.8	43.2	42.4	41.9	42.3	42.5	41.7	42.9	42.9	42.8	43.5
Benton Harbor MSA	40.7	40.7	42.1	42.4	41.6	40.7	40.9	40.8	41.1	40.8	41.8
Grand Rapids MSA	39.8	40.1	41.2	41.3	40.7	40.1	40.0	40.2	40.2	40.7	40.9
Kalamazoo MSA	40.7	42.9	42.7	42.1	41.8	42.1	41.6	42.7	42.0	41.8	42.9
Muskegon MSA	41.5	40.9	40.9	41.3	40.6	39.9	40.4	39.4	39.8	40.2	39.4
West Michigan, 5 MSAs	40.5	41.0	41.6	41.6	41.2	40.7	40.5	40.8	40.8	41.0	41.6
Michigan	40.5	42.2	43.2	43.1	41.7	41.5	41.2	42.0	41.7	42.2	42.0
United States	40.0	41.0	41.1	40.9	40.7	40.6	40.5	40.8	40.8	41.1	41.0

2. Initial Claims for Unemployment Insurance (Average per week)

Area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	437	315	295	318	338	388	431	344	371	373	342
Benton Harbor MSA	258	235	252	289	272	348	388	321	312	318	307
Grand Rapids MSA	1,298	1,019	1,038	1,061	1,361	1,527	1,689	1,381	1,389	1,444	1,436
Kalamazoo MSA	450	336	292	339	385	398	465	347	356	358	365
Muskegon MSA	504	351	320	354	388	444	490	400	419	448	406
West Michigan, 5 MSAs	3,005	2,260	2,196	2,361	2,742	3,105	3,481	2,775	2,855	2,934	2,872
Michigan	29,289	17,067	17,053	17,276	21,198	26,628	31,166	22,994	23,032	23,220	23,306
United States	430,975	325,600	304,940	316,880	368,050	443,680	467,250	429,930	431,410	420,840	415,960

3. New Dwelling Units - Put Under Contract

Area	Annual averages (Selected years)						By quarter (Seasonally adjusted annual rate)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	179	181	226	264	527	441	414	490	549	427	583
Benton Harbor MSA	259	361	390	383	493	392	311	425	538	575	625
Grand Rapids MSA	2,460	5,575	5,448	5,214	5,387	3,741	3,614	3,669	3,387	3,348	3,971
Kalamazoo MSA	1,670	1,192	1,485	1,640	1,662	708	700	754	757	836	1,043
Muskegon MSA	436	416	446	531	665	618	482	755	720	634	685
West Michigan, 5 MSAs	2,335	7,756	8,028	8,002	8,794	5,929	5,499	6,012	6,040	5,861	6,867
Michigan	26,893	51,482	47,118	43,817	48,025	35,998	33,993	37,291	38,384	37,537	40,582

4. National Purchasing Management Association Survey (Selected components indexed)[b]

Component	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
4. New orders	93	123	118	100	95	102	101	116	109	117	116
5. Change in inventories	90	97	99	91	82	80	77	83	81	87	90
6. Vendor performance	92	91	85	105	104	95	94	98	97	100	101
7. Changes in material prices	130	143	154	106	112	87	79	85	93	95	110

SOURCES: Average weekly hours and initial claims based on information from Michigan Employment Security Commission; number of housing units put under contract, F.W. Dodge Division, McGraw Hill Information Systems Company; survey data from the National Association of Purchasing Management. Seasonal adjustments by the Institute.

a. Survey results shown here are based on percent reporting conditions favorable to economic growth minus percent reporting conditions unfavorable to economic growth plus 100.

Table A-4

Employment Data for West Michigan MSAs and Michigan*

(Thousands of jobs - by place of work)

Total Employment[a]

Labor market area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	53.3	57.6	58.7	59.7	60.6	58.8	59.1	58.3	58.5	58.8	58.9
Benton Harbor MSA	58.7	63.8	65.3	67.0	67.4	66.5	66.4	66.6	66.6	66.5	66.7
Grand Rapids MSA	267.9	314.9	332.1	350.6	357.8	359.2	359.1	359.0	361.0	361.1	360.9
Kalamazoo MSA	95.3	104.4	108.5	113.6	115.2	112.5	112.5	112.3	112.3	112.5	112.5
Muskegon MSA	54.7	56.5	57.8	59.1	59.4	57.5	57.7	57.0	57.2	57.0	56.7
West Michigan, 5 MSAs	529.9	597.2	622.4	650.0	660.4	654.5	654.7	653.2	655.6	656.1	655.5
Michigan	3,351.3	3,735.8	3,819.2	3,922.3	3,949.2	3,865.7	3,865.5	3,857.8	3,862.5	3,866.4	3,861.7

Goods-Producing Employment[b]

Labor market area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	18.4	17.1	18.0	18.5	18.5	17.7	17.9	17.6	17.7	17.7	17.8
Benton Harbor MSA	22.7	23.4	23.6	24.2	23.8	22.7	22.4	22.9	22.7	22.4	22.5
Grand Rapids MSA	100.4	110.8	115.9	119.5	118.7	116.0	115.9	115.9	116.1	115.8	115.8
Kalamazoo MSA	31.8	33.0	34.6	34.6	33.4	31.5	31.5	31.4	31.5	31.5	31.3
Muskegon MSA	21.3	19.7	19.6	19.4	19.1	17.9	18.0	17.7	17.5	17.2	16.8
West Michigan, 5 MSAs	194.7	204.0	211.7	216.2	213.5	205.8	205.6	205.5	204.7	204.7	204.3
Michigan	1,086.1	1,105.5	1,098.1	1,121.6	1,089.4	1,027.8	1,026.9	1,025.8	1,029.6	1,030.2	1,031.1

Private Service-Producing Employment[c]

Labor market area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	25.1	29.2	29.3	29.6	30.6	30.1	30.2	30.0	29.9	29.9	29.9
Benton Harbor MSA	27.6	32.0	33.1	34.2	34.7	34.8	34.9	34.6	34.7	34.9	35.0
Grand Rapids MSA	136.9	173.1	183.5	197.8	205.1	208.1	207.9	208.7	209.6	209.8	210.1
Kalamazoo MSA	47.2	54.5	56.7	61.4	63.8	62.7	62.9	62.7	62.5	62.7	62.9
Muskegon MSA	24.7	28.0	28.8	30.3	30.8	30.3	30.3	30.3	30.2	30.3	30.5
West Michigan, 5 MSAs	261.5	316.8	331.4	353.3	365.0	366.0	366.2	366.3	366.9	367.8	368.3
Michigan	1,667.1	2,018.5	2,097.5	2,177.6	2,231.1	2,206.3	2,207.2	2,203.1	2,203.2	2,208.2	2,201.8

Government Employment

Labor market area	Annual averages (Selected years)						By quarter (Adjusted for seasonal variations)				
	1981	1987	1988	1989	1990	1991	1991			1992	
							II	III	IV	I	II
Battle Creek MSA	9.9	11.3	11.4	11.6	11.6	10.9	11.0	10.7	10.9	11.1	11.1
Benton Harbor MSA	8.4	8.4	8.6	8.7	8.9	9.1	9.1	9.1	9.2	9.2	9.2
Grand Rapids MSA	30.6	31.0	32.8	33.4	34.0	35.1	35.3	34.4	35.3	35.5	35.0
Kalamazoo MSA	16.3	16.8	17.3	17.6	18.0	18.2	18.1	18.2	18.3	18.3	18.3
Muskegon MSA	8.7	8.8	9.3	9.5	9.5	9.4	9.5	9.0	9.5	9.4	9.4
West Michigan, 5 MSAs	73.7	76.3	79.4	80.8	82.0	82.7	82.9	81.4	83.2	83.5	82.9
Michigan	598.0	611.6	623.5	623.2	628.6	631.6	631.4	628.9	629.7	628.0	628.9

SOURCE: Michigan Employment Security Commission. Seasonal adjustments by the Institute.

NOTE: Annual employment statistics are adjusted to reflect MESC's final average annual employment figures. Quarterly estimates are subject to change due to the addition of current quarter employment estimates.

a. Components may not add to totals because of rounding.

b. Manufacturing and construction and mining.

c. Transportation and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services.

Table A-5
Vacancy Rates for Selected Metropolitan Statistical Areas (MSAs) in Michigan

MSA	Total existing housing units				
	Housing units		Vacancy rates		
	Total	Vacant	All Types*	Homeowner	Rental
Ann Arbor	111,256	6,728	6.0	1.3	7.0
Battle Creek	55,619	3,807	6.8	1.1	8.8
Benton Harbor	69,532	8,507	12.2	1.5	6.6
Detroit	1,714,351	95,401	5.6	1.1	7.4
Flint	170,808	9,512	5.6	1.1	7.1
Grand Rapids	259,322	14,918	5.8	1.1	7.7
Jackson	57,979	4,319	7.4	1.1	6.5
Kalamazoo	88,955	5,253	5.9	1.3	8.0
Lansing	165,018	8,131	4.9	1.2	6.4
Muskegon	61,962	4,164	6.7	1.3	7.3
Saginaw-Bay City-Midland	155,508	7,273	4.7	1.0	5.5

SOURCE: 1990 U.S. Census Summary Tape File 1A.
*Includes vacant seasonal, recreational, or occasional use housing units.

MSA	Existing housing units plus units under construction (vacancy rates)				
	End date of survey	All types	Single family	Single family attached	Multi-family
Ann Arbor	03/07/90	4.2	1.6	6.3	7.5
Battle Creek	10/14/88	4.0	2.6	9.3	9.6
Benton Harbor	04/06/89	3.4	2.7	4.1	6.3
Detroit	12/11/90	3.2	2.1	5.9	6.6
Flint	03/16/89	3.7	2.8	6.0	7.1
Grand Rapids	03/25/89	3.4	2.0	5.2	7.9
Jackson	05/11/89	3.1	2.0	11.0	6.7
Kalamazoo	03/16/89	5.2	2.6	10.7	10.8
Lansing	10/27/88	3.3	2.6	4.1	5.3
Muskegon	06/01/89	2.9	2.3	17.0	3.9
Saginaw-Bay City-Midland	09/23/89	2.5	2.0	5.1	4.3

SOURCE: Federal Home Loan Bank of Indianapolis.
NOTE: Vacancy rates for United States are not strictly comparable. In 1991 vacancy rates published by U.S. Department of Commerce show rental housing vacancy rates for the first, second, third, and fourth quarters of 1991 at 7.5, 7.3, 7.6, and 7.3 percent. Homeowner housing vacancy rates for the same periods were 1.7, 1.8, 1.8 and 1.6 percent.

Table A-6
Population by Age Groups
Five Metropolitan Areas in West Michigan

Area		Percent Distribution						
		Total	Under 5	5-20	21-24	25-44	45-64	Over 64
Battle Creek	1990	135,982	7.4	23.9	5.1	30.4	19.8	13.4
	1980	141,579	7.4	27.1	6.7	26.6	20.9	11.3
Benton Harbor	1990	161,378	7.4	24.1	5.2	29.9	19.7	13.7
	1980	171,276	7.7	28.4	6.6	26.5	19.9	11.0
Grand Rapids	1990	688,399	8.7	24.7	6.3	33.3	16.5	10.5
	1980	601,680	8.2	28.4	8.0	27.7	17.8	9.8
Kent County	1990	500,631	8.7	24.1	6.3	33.7	16.4	10.8
	1980	444,506	8.1	27.8	8.3	27.5	18.1	10.2
Ottawa County	1990	187,768	8.5	26.5	6.1	32.2	16.8	9.8
	1980	157,174	8.4	30.1	7.4	28.4	17.0	8.7
Kalamazoo	1990	223,411	7.3	24.4	8.2	32.1	17.4	10.6
	1980	212,378	6.9	28.1	10.2	28.5	17.4	8.9
Muskegon	1990	158,983	8.1	24.2	5.2	31.1	18.3	13.1
	1980	157,589	7.9	28.4	7.1	25.9	20.0	10.7

SOURCES: 1980 Census *General Population Characteristics* and 1990 Census. Summary Tape File 1A from the Michigan State Office of Management and Budget.
NOTE: The 1980 and 1990 population figures for each of the MSAs is shown on Table A-11.

Table A-7
1990 Earnings by Industry for Selected Counties of Michigan
(Thousands of Dollars)

Earnings by industry	Berrien	Calhoun	Kalamazoo	Kent	Muskegon	Ottawa
Farm	$20,259	$11,794	$25,862	$27,320	$13,785	$56,796
Nonfarm	1,770,537	1,745,471	3,300,560	8,151,780	1,591,070	2,268,491
Private	1,556,234	1,425,290	2,875,205	7,479,269	1,359,899	2,030,003
Agricultural services, forestry, fisheries, and other	7,142	3,369	15,590	30,889	3,266	12,460
Mining	7,934	4,980	6,115	13,990	4,692	5,290
Construction	67,237	68,149	149,765	505,818	87,999	178,506
Manufacturing	684,841	640,603	1,240,623	2,633,085	583,884	970,809
Nondurable goods	141,197	393,461	733,348	757,122	114,716	314,038
Durable goods	543,644	247,142	507,275	1,875,963	469,168	656,771
Transportation & public utilities	110,290	107,240	116,536	319,267	84,590	100,975
Wholesale trade	78,222	54,912	123,522	797,933	63,441	111,187
Retail trade	161,085	143,124	258,707	886,919	163,415	184,521
Finance, insurance & real estate	67,818	93,613	174,587	403,574	40,802	58,184
Services	371,665	309,300	789,760	1,887,794	327,810	407,891
Government	214,303	320,181	425,355	672,511	231,171	238,488
Total earnings by place of work	1,790,796	1,757,265	3,326,422	8,179,100	1,604,855	2,325,287

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Table A-8
Consumer Price Index

Consumer Price Index (CPI), U.S. City Average (1982-84=100)													
Year	Annual Avg.	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
CPI for All Urban Consumers (CPI-U)													
1984	103.9	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3
1985	107.6	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3
1986	109.6	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5
1987	113.6	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4
1988	118.3	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5
1989	124.0	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1
1990	130.7	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8
1991	136.2	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9
1992	...	138.1	138.6	139.3	139.5	139.7	140.2	140.5	...	...	...	...	...
CPI for Urban Wage Earners and Clerical Workers (CPI-W)													
1984	103.3	101.6	101.8	101.8	102.1	102.5	102.8	103.2	104.2	104.8	104.8	104.7	104.8
1985	106.9	104.9	105.4	105.9	106.3	106.7	107.0	107.1	107.3	107.6	107.9	108.3	108.6
1986	108.6	108.9	108.5	107.9	107.6	107.9	108.4	108.4	108.6	109.1	109.1	109.2	109.3
1987	112.5	110.0	110.5	111.0	111.6	111.9	112.4	112.7	113.3	113.8	114.1	114.3	114.2
1988	117.0	114.5	114.7	115.2	115.7	116.2	116.7	117.2	117.7	118.5	118.9	119.0	119.2
1989	122.6	119.7	120.2	120.8	121.8	122.5	122.8	123.2	123.2	123.6	124.2	124.4	124.6
1990	129.0	125.9	126.4	127.1	127.3	127.5	128.3	128.7	129.9	131.1	131.9	132.2	132.2
1991	134.3	132.8	132.8	133.0	133.3	133.8	134.1	134.3	134.6	135.2	135.4	135.8	135.9
1992	...	136.0	136.4	137.0	137.3	137.6	138.1	138.4	...	...	...	...	...

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

NOTES: Monthly data are shown above unadjusted for seasonal variations. Unadjusted CPI data are used extensively for escalation purposes. Although the CPI is often called the "Cost-of-Living Index," it measures only price change, which is just one of several important factors affecting living costs. All CPI series are linked historically to the original CPI Index for Urban Wage Earners and Clerical Workers.

These series contain no revision but are reprinted for the convenience of the user.

PERCENT CHANGE: Movements of these indexes from one time period to another are usually expressed as percent changes rather than changes in index points. Index point changes are affected by the level of the index in relation to its base period while percent changes are not. Examples of computation follow:

$$\left[\frac{\text{108.6 (1986 annual avg.) - 106.9 (1985 annual avg.)}}{\text{106.9 (1985 annual avg.)}}\right] \times 100 = 1.6\% \text{ change 1985 to 1986, CPI-W.}$$

$$\left[\frac{\text{109.3 (1986 December) - 108.6 (1985 December)}}{\text{108.6 (1985 December)}}\right] \times 100 = 0.6\% \text{ change December 1985 to December 1986, CPI-W.}$$

$$\left[\frac{\text{110.0 (1987 January) - 109.3 (1986 December)}}{\text{109.3 (1986 December)}}\right] \times 100 = 0.6\% \text{ change December 1986 to January 1987, CPI-W.}$$

Table A-9
Selected Labor Market Indicators
(Not adjusted for seasonal variations)

Area	Average for manufacturing production workers[a] June 1992			Civilian labor force unemployment rate[b]	
	Weekly hours	Hourly earnings	Weekly earnings	April 1992	June 1992
United States	41.3	$11.45	$472.90	7.1	7.8
Michigan	42.8	14.95	639.86	9.4	9.0
West Michigan MSAs:					
Battle Creek	43.3	17.86	773.34	8.0	7.6
Benton Harbor	42.1	11.08	466.47	9.7	9.2
Grand Rapids	41.5	12.45	516.67	7.6	7.4
Kalamazoo	42.0	14.83	622.86	6.1	6.2
Muskegon	40.3	12.24	493.27	12.7	12.3
Other MSAs:					
Ann Arbor	43.0	16.56	712.08	5.2	5.3
Detroit	44.2	16.22	716.92	9.2	9.2
Flint	42.5	18.44	783.70	12.4	12.3
Jackson	42.7	11.06	472.26	10.6	10.6
Lansing-E. Lansing	42.3	16.98	718.25	6.1	5.9
Saginaw-Bay City-Midland	43.6	16.60	723.76	9.0	8.5
Other Areas:					
Upper Peninsula	40.7	11.09	451.36	13.6	10.6

SOURCES: U.S. Department of Labor and the Michigan Employment Security Commission (MESC) (most recent benchmark).

a. Preliminary. Earnings include overtime and part-time wages.

b. Seasonally adjusted rate for U.S. was 7.2 percent in April 1992 and 7.8 percent in June 1992. Seasonally adjusted rate for Michigan was 9.4 percent in April 1992 and 8.8 percent in June 1992.

Table A-10
Commercial Banking Data
First Quarter 1992
(In thousands of current dollars)

	Metropolitan (MSAs)[a]				
	Battle Creek	Benton Harbor	Grand Rapids	Kalamazoo	Muskegon
Total deposits	$46,503	$705,131	$5,613,984	$2,190,024	$263,366
Total transaction accounts[b]	14,431	159,054	1,264,604	571,995	51,925
Nontransaction savings[c]	17,744	170,981	1,504,466	707,708	75,189
Time deposits<$100,000	12,513	313,744	1,931,716	737,485	101,996
Time deposits>$100,000[d]	1,815	61,094	912,787	161,597	34,256
Total assets	51,970	786,647	7,268,987	2,555,784	304,927
Total loans	22,839	510,358	4,537,956	1,564,563	196,558
Agriculture	163	3,289	40,863	22,483	1,006
Business	3,028	100,559	1,180,526	256,138	51,291
Consumer	4,342	79,038	732,264	335,511	37,871
Government	726	6,382	66,350	81,651	6,444
Real estate	14,573	314,693	2,456,925	848,450	98,486
Other[e]	7	6,397	61,028	20,330	1,460

SOURCE: Federal Reserve Bank of Chicago.

a. Reported data includes deposits and assets in all branches of banks with home offices in the five metropolitan statistical areas (MSAs).

b. Total transaction accounts include demand deposits, automated teller accounts, and NOW accounts.

c. Nontransaction savings include money market depository accounts (MMDA) and IRAs.

d. This category includes both time certificates and open-time certificates over $100,000.

e. Includes loans made to depository institutions, leases, and bankers' acceptances, and unearned income.

Table A-11
Population and Income Update for Selected Area

Area	Population				Per Capita Income			
	1990	1980	Change	% change	1989	1979	% change current dollars	% change constant dollars
Michigan	9,295,297	9,262,078	33,219	0.4	$14,154	$7,688	84.1	7.8
Southwest Michigan	1,751,125	1,646,424	104,701	6.4	13,271	7,072	87.7	9.9
Metropolitan (MSAs)								
6-county total	1,368,153	1,284,502	83,651	6.5	13,680	7,240	88.9	10.6
Battle Creek MSA	135,982	141,557	(5,597)	-4.0	12,729	7,211	76.5	3.4
Benton Harbor MSA	161,378	171,276	(9,898)	-5.8	12,636	6,728	87.8	10.0
Kalamazoo MSA	223,411	212,378	11,033	5.2	14,548	7,769	87.3	9.6
Grand Rapids MSA	688,399	601,680	86,719	14.4	14,370	7,437	93.2	13.1
Kent County	500,631	444,506	56,125	12.6	14,378	7,522	91.1	11.9
Ottawa County	187,768	157,174	30,594	19.5	14,347	7,198	99.3	16.7
Muskegon MSA	158,983	157,589	1,394	0.9	11,345	6,358	78.4	4.5
Nonmetropolitan								
7-county total	382,972	361,922	21,050	5.8	11,813	6,476	82.4	6.8
Allegan	90,509	81,555	8,954	11.0	12,498	6,744	85.3	8.5
Barry	50,057	45,781	4,276	9.3	12,417	6,965	78.3	4.4
Branch	41,502	40,188	1,314	3.3	11,033	6,449	71.1	0.2
Cass	49,477	49,499	(22)	0.0	12,167	6,481	87.7	9.9
Oceana	22,454	22,002	452	2.1	9,582	5,627	70.3	-0.3
St. Joseph	58,913	56,083	2,830	5.0	12,039	6,473	86.0	8.9
Van Buren	70,060	66,814	3,246	4.9	11,233	6,108	83.9	7.7

SOURCES: State of Michigan Department of Management and Budget and U.S. Bureau of the Census.
NOTE: Battle Creek MSA is Calhoun County; Benton Harbor MSA is Berrien County; Kalamazoo MSA is Kalamazoo County; and Muskegon MSA is Muskegon County.

Table A-12
Existing Home Sales

	Number of sales second quarter			Average sales price second quarter		
	1992	1991	Percent change	1992	1991	Percent change
Battle Creek Area	351	353	-0.6	62,462	58,174	7.4
Berrien County Area	653	717	-8.9	84,174	80,651	4.4
Grand Rapids Area	2,030	2,073	-2.1	83,541	79,905	4.6
Holland Area	336	326	3.1	88,968	90,846	-2.1
Kalamazoo Area	1,118	1,284	-12.9	79,195	77,004	2.8
Muskegon Area	402	396	1.5	67,273	54,926	22.5
Michigan	16,564	17,582	-5.8	88,896	87,069	2.1

SOURCES: Michigan Association of Realtors and the Muskegon Board of Realtors.

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